

THE JAMESTOWN PROJECT



JAMESTOWN, VIRGINIA



National Park Service
Colonial National Historical Park, Jamestown Unit

Association for the Preservation of Virginia Antiquities
Jamestown National Historic Site

Volume 1
Chapters 1-3

THE JAMESTOWN PROJECT

FINAL DEVELOPMENT CONCEPT PLAN & ENVIRONMENTAL IMPACT STATEMENT

Location:

Jamestown National Historic Site
Colonial National Historical Park, Jamestown Unit
Jamestown, Virginia

Responsible Agencies:

National Park Service, United States Department of the Interior
Association for the Preservation of Virginia Antiquities

Proposed Action:

Jamestown, the birthplace of modern American society, is a world-class cultural and historic treasure that needs to be promoted, explored, and fully presented to communicate its significance in history. Often overlooked, Historic Jamestowne - America's Birthplace is the site of the first permanent English colony in North America, predating Plymouth, Massachusetts, by more than a decade. It marks the time and place of the beginning of the history of this nation.

Based on Jamestown's importance to United States history and its numerous opportunities for research and discovery, the overriding purpose of the Jamestown Project is for the APVA and NPS to jointly **research, protect, and present** to the public the resources at Jamestown. The APVA and NPS would like to capitalize on their strong partnership and recent discoveries to enhance educational and research opportunities and connect the visitor more closely with the site, its past peoples, and their experiences. In order to reach and educate the broadest possible audience, the Jamestown Project goals are to: improve the quality of the visitor experience; protect the Jamestown collection and associated archival materials; enhance research and educational opportunities; and strengthen the APVA/NPS partnership.

Five alternative plans for the Jamestown Project are presented in this DCP/EIS, including a No Action Alternative that would continue current conditions and four action alternatives. The proposed alternatives have been designed to protect cultural and natural resources while furthering the goals of the project. The proposed plans involve strategies for an updated interpretive experience; the improvement of facilities (including the current Visitor Center, collections storage, and parking); the addition of comfort/hospitality services and new interpretive venues; and enhanced and multimodal transportation options (including water taxis/tours, hike/bike trails, and shuttle services). This document assesses both the adverse and beneficial impacts of the alternatives on partnerships; cultural, physical, natural, and socioeconomic resources; research and education; visitor experience; operations; and transportation and site access.

**Note to Reviewers
and Respondents**

The Final Development Concept Plan/Environmental Impact Statement has been prepared based on the comments received during the 60-day public review of the draft document. Every comment was considered carefully by the planning team. Letters received from federal, state, and local agencies and organizations as well as formal responses to substantive comments are included in "Chapter 5: Consultation and Coordination." Should you have further concerns or comments on the Jamestown Project, please contact Alec Gould, Park Superintendent, as listed below.

Contacts:

Alec Gould, Superintendent
Colonial National Historical Park
P.O. Box 210
Yorktown, Virginia 23690
(757) 898-2401



Founded in 1889, The Association for the Preservation of Virginia Antiquities (APVA) is the oldest statewide preservation organization in the nation. Today, thanks to the continuing support of members and generous donors, the APVA is sharing the rich heritage of Virginia through a portfolio of properties that span the centuries from early seventeenth through the mid-nineteenth centuries. The APVA's Revolving Fund adds a dimension to the organization's ability to preserve Virginia's historic past by partnering with individuals and organizations interested in preserving sites across the state. A nonprofit, charitable, and educational organization, the APVA is preserving, interpreting, and sharing significant landmarks across the Commonwealth of Virginia to benefit visitors today and future generations.



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of offland and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all out people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

April 2003

United States Department of the Interior- National Park Service



E Executive Summary

Under the National Environmental Policy Act of 1972 (NEPA), the National Park Service (NPS) is required to prepare an Environmental Impact Statement (EIS) to assess the potential impacts of a proposed plan and various alternatives to that plan. This is a summary of the Final Development Concept Plan/Environmental Impact Statement (DCP/EIS) for the Jamestown Project, which presents and analyzes four action alternative plans for improvements at the Jamestown unit of Colonial National Historical Park (Colonial NHP) and the Jamestown National Historic Site owned and managed by the Association for the Preservation of Virginia Antiquities (APVA).

PURPOSE OF AND NEED FOR ACTION

Jamestown is a world-class cultural and historic site that needs to be promoted, explored, and fully presented to communicate its significance in history. Often overlooked, Jamestown Island is the site of the first permanent English colony in North America, predating Plymouth, Massachusetts, by more than a decade. Jamestown was the place where many cultures from three continents (North America, Africa, and Europe) came together to form a new society, marking the time and place of the beginning of the history of this nation. They shaped each other's lives, adopted each other's ways, and established laws, customs, and a language that Americans use today. In addition, the meeting of America's first representative legislature occurred at Jamestown in 1619, and Jamestown served as the first capital of the colony of Virginia (1607-1699).

Jamestown Island is an archaeological wealth of artifacts and other evidence of human activity dating back over 12,000 years. As such, it presents a

unique opportunity for both visitors and researchers: there are very few 17th century sites with an existing archaeological collection and potential for additional collection that is within sight of its context. This highly unusual situation not only provides researchers and archaeologists with immediate access to information and materials processing, but it greatly enhances the visitor experience and education. Because Jamestown contains many resources that are yet to be unearthed, the site, an active archaeological dig, presents huge possibilities for visitors to see the objects as they are being found. With this ongoing research and uncovering, the site will constantly evolve and grow in its body of research and discovery.

Based on Jamestown's importance to United States history and its unending opportunities for research and discovery, the overriding purpose of the Jamestown Project is for the APVA and NPS to jointly **research, protect, and present** to the public the resources at Jamestown. The APVA and NPS would like to capitalize on their strong partnership and recent discoveries to enhance educational and research opportunities and connect the visitor more closely with the site, its past peoples, and their experiences. In order to reach and educate the broadest possible audience, the Jamestown Project goals are to:

- Improve the Quality of the Visitor Experience
- Protect the Jamestown Collection and Associated Archival Materials
- Enhance Research and Educational Opportunities
- Strengthen the APVA/NPS Partnership

ALTERNATIVES

Five alternative plans for the Jamestown Project are presented in the Final DCP/EIS, including a No Action Alternative (Alternative A) that would continue current conditions and four action alternatives (Alternative B – Preferred Alternative and Alternatives C, D, and E). The four action alternatives respond directly to the goals and issues identified in previous management, interpretive, and planning documents developed by the APVA and NPS.

Changes are being proposed because the current facilities, interpretation, and visitor experience do not:

- Do justice to the status of the historical site as one of supreme national importance and world significance.
- Encourage understanding of this status among the visiting public.
- Adequately convey the importance of the continued guardianship and research of the site.
- Successfully interpret the complexities of a many-layered story to the public.
- Provide adequate opportunities to present new research to the public.
- Fully capitalize on the intense interest of visitors in the recent and ongoing archaeological work, process, and discoveries.
- Successfully encourage the visitor to explore the core historic site and outer Island in their entirety.

- Present the immense wealth of both material cultural and natural resources to the public to the best possible degree, within the constraints of resource protection.
- Adequately inspire, engage, or otherwise motivate the visitor to want to find out more.

Building on previous APVA and NPS management documents and interpretive plans, the proposed alternatives for the Jamestown Project involve strategies for an updated interpretive experience; the improvement of facilities (including the current Visitor Center, collections storage, and parking); the addition of comfort/hospitality services and new interpretive venues; and enhanced and multimodal transportation options (including water taxis/tours, hike/bike trails, and shuttle services).

Alternative A: No Action Alternative

Alternative A, the No Action Alternative, assumes continuing current management practices at Jamestown Island and the Glasshouse without any substantive changes in facilities, infrastructure, or resource investment.

ALTERNATIVE A FACILITIES SUMMARY

Visitor Center – **30,000 sf**

Includes **300 sf** comfort station

Includes **4,000 sf** collections storage and curatorial lab

The No Action Alternative, required by federal regulations, is used as the baseline for comparing the impacts of the other proposed alternatives. In Alternative A, current buildings remain with future programming, research, archaeological investigation, cultural landscape investigation, and maintenance operations as planned for both the APVA and the NPS and their joint management goals.

Alternative A would allow for any necessary changes to management and/or operations of the existing facilities over time; however, this alternative would only allow for slight improvements to the visitor experience at Jamestown. Therefore, the current status is not a fitting memorial to all the peoples who, through trial and tribulation, forged a new society at the site that became a new nation.

Elements Common to the Action Alternatives

Several elements are common to each action alternative and create a foundation from which Alternatives B, C, D, and E were developed. The alternatives include additional elements and form a reasonable range of actions. The common elements include:

Glasshouse Point: The parking at Glasshouse Point would be reconfigured to accommodate 31 cars and 12 buses. The original circulation concept would be retained, as it is part of the cultural landscape. This common element is a response to current bus back-up problems, which generate safety issues on the Colonial Parkway and at the entrance to the Glasshouse parking.

Pedestrian/Bicycle Path: There would be a separate gated pedestrian/bicycle path on NPS property from the Glasshouse to the entrance of Jamestown Settlement.

Loop Drive: The Loop Drive would remain in its current location and condition, with new interpretation on the wayside signage.

Shade and Seating: Visitors would be provided with shade and seating throughout the project area at major facilities, at important site venues, and along the circulation system over the landscape.

Food and Restrooms: Visitors would be provided with food and restrooms in the major facilities and at the Agricultural exhibit, the east anchor interpretive exhibit on the historic site.

Walkway Transition (Hub): A walkway transition (hub) or point of choice would be provided on the historic site. Here, visitors would be introduced to the site and presented their options for experiencing the various site venues and exhibits. They could choose to go to the 1607 James Fort Site, the Ludwell exhibit facility (west anchor), the Townsite, or the Agricultural exhibit area (east anchor). This “hub” would be located around the 1907 obelisk, with site modifications to include removal of the pear trees (non-native plant material) and improvement of damaged paving and circulation patterns.

Agricultural Exhibit Area: The Agricultural exhibit area would form the eastern anchor of the historic site. Visitors would be drawn to the far eastern end of the Townsite by activities and exhibits focusing on agricultural aspects of Jamestown’s history, potentially including an experimental archaeology site. The site does not relate directly to historic remains found beneath it, but would be representative of the kinds of agricultural activity conducted on the Island. This exhibit would provide an opportunity for visitors to see the types of crops and agricultural methods of the early settlers. By having features located at various and distinct parts of the Island, visitors would have several choices to structure their experience and to interact with the exhibits.

Ludwell Exhibit Facility: The Ludwell exhibit facility would anchor the western end of the historic site. The exhibit space would be located in a 7,500 square-foot facility on APVA property, and it would house artifacts from the Townsite. Experimental archaeology would also occur at the Ludwell site. Archaeologists, craftspeople, and students/interns could be seen demonstrating 17th century building techniques, using the evidence found on the Island. The archaeological process would be examined here and linked directly back to the human stories of the site. The strong evidence in the general vicinity of this area relating to issues of life and death at Jamestown would also be presented, focusing especially on research conducted on the “potter’s

field” type of burial site. The opportunity also exists here to emphasize the Ludwell Statehouse Group, which is one site where the first government meetings were held and legislative decisions were made.

Ambler House: An observation platform would be located in the Ambler House ruins. A new platform constructed at the second-floor level would provide an excellent view of the surrounding 17th century Townsite and a better understanding of how the elements of the site interact. The house ruin is currently on the highest point in the landscape and commands views up and down the Townsite and across the James River. The viewing platform could be an independent structure system within the ruin and would contact the original walls for the purpose of saving and protecting those walls, which are currently in need of support.

Ranger Station: The ranger station at the existing entrance to Jamestown Island would remain either as gatehouse support or Glasshouse support, depending on the action alternative.

Comfort Station and Pedestrian Bridge: The existing comfort station and pedestrian bridge at the NPS parking lot on Jamestown Island would be removed in all the action alternatives. A relocated pedestrian bridge is proposed under all alternatives.

Alternative B: Preferred Alternative

Alternative B, the Preferred Alternative, would maximize the interpretive use of the resource. It is also the only alternative to effectively address the currently inadequate visitor experience and fully realize the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b). The key proposed visitor facility structures are summarized below; each would perform very specific and individual tasks. Together they would create an exciting and diverse discovery experience of quality and vision, appropriate to the status of the site and its significance.

ALTERNATIVE B FACILITIES SUMMARY

Visitor Center/educational facility	19,000 sf
Collections storage, research, and curatorial	8,000 sf
Intermodal Transportation Terminal	2,000 sf
Observation Building	5,000 sf
TOTAL	34,000 sf

Intermodal Transportation Facility at Neck of Land: This facility would orient visitors to Jamestown Settlement, Jamestown Island, and other historic site opportunities and relationships in the immediate context of Jamestown. It would also offer the immense opportunity to provide contextual introductory interpretation, including the Island setting, prehistoric context, and natural environment. Further, this facility would serve as an essential node to allow transfer to alternative transportation routes to the Island. Visitors could choose alternate means of transport to the Island – by foot, bicycle, boat, or shuttle. An extensive pedestrian/bicycle path would be aligned on the pre-1957 road trace before entering the Neck of Land marsh where it becomes a boardwalk, connecting to Jamestown Island by a pedestrian bridge over Back River.

Replacement Visitor Center/Educational Facility in the Island Parking Lot: This facility would serve as the point of arrival to Jamestown Island and would provide a sense of welcome for visitors. It would offer visitor support facilities, such as café, retail, and toilets, and an orientation to the Island and the core historic site. The major themes of the Jamestown storyline would be introduced, and some collections would be displayed within temporary exhibition space. Dedicated educational and programming space would also be housed in this facility.

Observation Building: This facility would provide a unique interpretive experience, linking site views to artifacts and storylines. The building would contain significant collection display space and would reuse the existing Visitor Center, though greatly reduced in size (from 30,000 square feet to 5,000 square feet). The facility would provide the best point from which to view the Townsite in all directions and would allow visitors to prepare for an exploration of the site or to reinforce what they have already seen on the site. The building's design and displays would help to distribute visitors across the site, encouraging the experience and use of the Island landscape. Finally, on a simple practical level, the Observation Building would provide relief from summer heat and flies, or winter rain and cold, as visitors cross and recross the extensive site.

APVA and NPS Collections and Research Center: This facility would provide a world-class research and collections storage and conservation facility and would offer easy access to joint collections and archives. Most importantly, it would allow for location in one facility of the Jamestown collection. This facility would also remove the NPS collection out of its current location in the basement of the existing 1956 Visitor Center and out of the threat of flood.

Intermodal Transportation: In Alternative B, the interpretive benefits of the modal transfers would be fully explored. Only in this alternative would the hike/bicycle route take visitors through the marsh areas north of the Island and directly onto the Island via a bridge (which has a historical precedent). This means of non-water access to the Island would be the only one to fully grasp the interpretive opportunities of the site and to allow them to be successfully achieved.

Exhibit Venues: In Alternative B, as well as the other action alternatives, new exhibit venues would be designed for the east and west ends of the historic Townsite. The eastern anchor would include the Agricultural exhibit, focusing on agricultural aspects of Jamestown's history and potentially including some experimental archaeology. The western

anchor, the Ludwell exhibit facility, would also include experimental archaeology along with exhibits related to the Ludwell Statehouse Group and the trials and tribulations faced by the colonists.

Alternative C

In Alternative C, the division of functions is similar to Alternative B, with the major exception that the main facility on Neck of Land would house NPS collections in addition to visitor functions. Consequently, the proposed facility at Neck of Land is much larger in Alternative C than in Alternative B. Alternative C also proposes the Observation Building and exhibit venues, as they were described above under Alternative B.

ALTERNATIVE C FACILITIES SUMMARY

Visitor Center	18,000 sf
Collections storage, research, and curatorial	8,000 sf
Intermodal Transportation Terminal	2,000 sf
TOTAL	28,000 sf*

*Combined square footage and functions in one building

Ticket facility on Island	1,000 sf
Observation Building	5,000 sf
TOTAL	34,000 sf

Intermodal Transportation Terminal/Visitor Center/Educational Facility/NPS Collections and Research Facility: This one, large facility would house all of the functions of the Intermodal Transportation Terminal, Visitor Center, and NPS collections storage and research. By having the main facilities on Neck of Land, the majority of vehicular traffic would be removed from the Island. The location of the major facility in Alternative C would be remote from the Island; therefore its interpretive and practical use for site introduction and as a programming base would be weakened.

In addition, this facility, as proposed under Alternative C, would split the Jamestown collection by housing the NPS collections at Neck of Land and keeping the APVA collections at the Jamestown Rediscovery™ Center. This would not foster collaborative research and study between the two organizations and would split what is essentially one collection - the Jamestown collection. Also, this alternative would not provide for the examination and display of artifacts in their original context because NPS research facilities would be remote from the Townsite.

Intermodal Transportation: From Neck of Land, alternative transportation options would be available to reach the Island. These options would include shuttle, water transport, and pedestrian/bicycle opportunities on the existing Colonial Parkway pavement. There would be no separate hike/bicycle paths in this alternative, except the path from the Glasshouse to Jamestown Settlement that is common to all of the alternatives. The hike/bicycle path in Alternative C would follow a route along the existing Parkway, out of the natural environment and in close proximity to road traffic, neither of which would be helpful in terms of building interpretive atmosphere, nor in terms of providing points at which waysides and overlooks of the marsh and northern shore of the Island could be constructed.

Alternative D

Alternative D proposes a reconfigured Visitor Center/educational facility/NPS collections/Observation Building on Jamestown Island, and leaves Neck of Land as it currently exists, thus maximizing previously disturbed areas and minimizing new disturbance. However, all the opportunities for interpretation and approach to the Island, as described in Alternative B, would be missed, significantly weakening the visitor experience. It would also seriously hinder visitor understanding of the physical context of the Island and its early history, especially in relation to local

tribal presence and perspectives. Alternative D would, however, provide new interpretive opportunities at the proposed exhibit venues, as described under Alternative B.

ALTERNATIVE D FACILITIES SUMMARY

Visitor Center	19,000 sf
Collections storage, research, and curatorial	8,000 sf
Observation Building	5,000 sf
TOTAL	28,000 sf*

*Combined square footage and functions in one building.

Visitor Center/Educational Facility/NPS Collections/Observation Building: This facility would be one large, multi-storied structure on the site of the existing 1956 Visitor Center and would house the NPS collections (moved out of the basement). The building would also include the Visitor Center/educational facility and the functions of the Observation Building. Initial orientation, interpretive introduction, most of the interpretive exhibits, temporary exhibition, most of the collections display, the concept of the Observation Building, educational and programming facilities, offices, and visitor facilities would be housed within this one building.

In Alternative D, the Jamestown collection would remain on the Island. However, the NPS portion would not be colocated with the APVA portion. In order to move the NPS portion of the Jamestown collection above the 500-year floodplain, the existing 1956 Visitor Center would require an additional story. This facility would have to accommodate collections, research, and curatorial space. As the current Visitor Center sits within the core historic site and is already a visual intrusion, its increased size would cause it to have a greater visual impact than the existing Visitor Center.

Intermodal Transportation: The existing Island parking would remain, with no changes to Neck of Land, and there would be no pedestrian/bicycle or boat access beyond what is currently available. The existing Colonial Parkway would remain accessible to pedestrians and cyclists, and the Jamestown Explorer would be available for water tours but would not provide Island access. The only separate hike/bicycle path would be from the Glasshouse to the Jamestown Settlement. Mass transit options would be available via the proposed Colonial Parkway shuttle or Colonial Williamsburg buses.

Alternative E

In Alternative E, the distribution of facilities and structures would be similar to Alternative B, with the significant exception that the NPS collections would be remotely housed in Williamsburg or James City County.

As described under Alternative B, Alternative E would include the Intermodal Transportation Facility at Neck of Land (with the difference of having a smaller parking lot), a replacement Visitor Center in the existing Island parking lot, the Observation Building (smaller than in Alternatives B and C), and exhibit venues.

ALTERNATIVE E FACILITIES SUMMARY

Visitor Center	19,000 sf
Observation Building	2,500 sf
Intermodal Transportation Terminal	2,000 sf
<u>Collections storage/research/curatorial (off-site)</u>	<u>8,000 sf</u>
TOTAL	31,500 sf
On-site	23,500 sf
Off-site	8,000 sf

Observation Building: Like Alternatives B and C, Alternative E also proposes the Observation Building, as described above under Alternative B. However, the facility proposed under Alternative E would be half the size of the Observation Building proposed for Alternatives B and C, thus functions would have to be scaled back and visitors may have to choose other site venues first if lines form at the Observation Building.

NPS Collections Facility Off Site: The NPS collections facility would be located away from Jamestown in the Williamsburg/James City County area. The building would have the same requirements for safety and protection of the collections as any other NPS collections facility. In addition, land would have to be purchased or leased for construction of the facility. In Alternative E, the separation of the Jamestown collection – moving the NPS artifacts to a more remote location and leaving the APVA collection on the Island at the Jamestown Rediscovery™ Center – would seriously weaken the research strength of the Island and would undermine the interpretive concept of “Discovery.” It would also greatly diminish collaborative research benefits and interpretive support and would have practical concerns for staffing and operations.

Intermodal Transportation: Alternative modes of transportation to the Island would be available through water transport and a separate pedestrian/bicycle path to the Powhatan Creek Overlook. This alternative would include an extensive separate pedestrian/bicycle path winding across Neck of Land and connecting with the Powhatan Creek Overlook by a new bridge across Powhatan Creek. There would also be a boat route from Neck of Land to Jamestown Island. The hike/bike route in Alternative E would cross the Neck of Land marsh to the west, providing some interpretive opportunities. However, it would then rejoin the Parkway, effectively destroying at this point the unique and “special” sense of arrival as provided by Alternative B, which would provide a direct link to the Island, without the proximity of vehicular traffic.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

“Chapter 3: Affected Environment” describes the Jamestown Project environment that would be affected by the alternatives and/or that would affect the alternatives if they were implemented. This baseline information is necessary to understand the issues and alternatives and to determine the impacts of the alternatives, as discussed in “Chapter 4: Environmental Consequences.” Relevant impact topics were selected based on agency and public concerns, regulatory and planning requirements, and known resource issues. Topics can be grouped into major categories: Partnerships, Resources and Environment, Research and Education, Visitor Experience, Operations, Buildings and Utilities, and Transportation and Site Access.

“Chapter 4: Environmental Consequences” provides the scientific and analytic basis for comparison of the alternatives. Impacts are described in terms of context, duration, and intensity. They include beneficial and adverse effects, direct and indirect effects, and cumulative effects.

Major Impacts Associated with the No Action Alternative

Alternative A would continue existing conditions at Jamestown Island. The NPS portion of the Jamestown collection would be in danger of damage or loss during heavy storms; no improvements to the interpretive program would be made; and operations and infrastructure would be inadequate to support future demands. As 2007 approaches, Jamestown Island would miss out on an opportunity to draw and educate increased numbers of visitors.

Major Impacts of the Action Alternatives

The action alternatives share many resource protection elements, while their respective approaches to interpretation and visitor services are substantially different in scope and scale. Consequently, some impacts are similar, while

others differ in nature and magnitude. For instance, Alternative D generally has the fewest impacts to natural resources because it lacks development at Neck of Land. Alternative B, on the other hand, has the greatest beneficial impacts to research, education, and partnerships as it provides for joint APVA/NPS collections and opportunities for seeking new partners (i.e., water taxi, concessions, and research/monitoring of natural resources).

Partnerships

Alternative B offers the greatest number of venues to visitors and has the most benefits to partnerships. In addition to offering the greatest benefits to other partners, Alternative B would seek to strengthen the APVA/NPS partnership by combining collections, research, and curatorial facilities in an expanded Jamestown Rediscovery™ Center. Additionally, Alternative B, as well as Alternatives C and E, would provide an Intermodal Transportation Terminal at Neck of Land that would help to introduce visitors to the area and to both Jamestown Island and Jamestown Settlement, as well as provide a hub for moving between various areas of the site. Alternatives B, C, and E would strengthen partnerships with major institutional and agency partners through new research ventures; however, the APVA/NPS partnership would remain strained under Alternatives C and E due to separated collections, research areas, and common spaces.

Resources and Environment

Each of the action alternatives would improve preservation, interpretation, and maintenance of the site’s cultural and archaeological resources. Construction throughout the site, particularly in Alternatives B, C, and E, would affect known and unknown archaeological sites, and an APVA or NPS archaeologist would be present to ensure protection of archaeological sites and catalog any new finds. Impacts to historic buildings, structures, and cultural landscapes, including the Colonial Parkway, would range from negligible to major; however, mitigative measures would be employed to minimize the adverse impacts.

With regards to the Jamestown collection, all action alternatives seek to further protect the artifacts and archives from damage or loss. Overall impacts would be both beneficial and adverse, ranging from minor to major.

Alternatives B, C, and E would have similar impacts to a variety of natural resources, including wetland and upland habitats, floodplains, Chesapeake Bay preservation areas, threatened and endangered species, and water and air quality. Overall, impacts to these resources range from negligible to minor, with the exception of visual quality and aesthetics (minor to moderate impacts).

In all cases, for both cultural and natural resources, design considerations, best management practices, and mitigative measures would be employed to minimize impacts to resources.

Research and Education

Alternative B best achieves both APVA and NPS research and education objectives. Alternatives C, D, and E meet some of the objectives, but only Alternative B would allow for optimal collaborative research and educational programming. This alternative would include a joint campus, the replacement Visitor Center/educational facility, with facilities to support both the research and educational arms of the learning center. In addition, the collections of both organizations would be housed together at the expanded Jamestown Rediscovery™ Center. Along with these facilities would come many benefits – joint collections, staffing interactions, ease of access for researchers, and more coordinated management and interpretation. With the facilities to support an early American historical archaeology research center, Jamestown could become recognized as the premier 17th century research facility in the United States. In addition, the educational benefits of this alternative would include dedicated education space, easy access to the site for education groups, and exhibit areas providing opportunities for students to comprehend the Jamestown interpretive themes.

Visitor Experience

Alternative B would best enable the NPS and APVA to achieve the goals identified in the *Jamestown Long Range Interpretive Plan* (Colonial NHP 200b) and the Haley Sharpe *Jamestown Island Interpretive Plan* (2001b) regarding the visitor experience. Under this alternative, the greatest number of interpretive opportunities would be available to visitors during pre-visit, approach, and on-site experiences. The comprehensive use of a variety of media with direct relationships to natural and cultural resources would maximize the presentation of primary themes.

Most of the beneficial effects of Alternative B would also result in Alternatives C, D, and E. However, under Alternative C, the disconnected replacement Visitor Center at Neck of Land would greatly reduce visitors' time on the Island, diminishing the possibility of a seamless interpretive experience. Alternative D's lack of boat access and alternative transportation options to the Island would limit visitor understanding of the relationship of the cultural and natural resources. The reduced square footage of the Observation Building in Alternative E would limit interpretive and artifact display space.

Operations

The impacts to NPS operations under action alternatives B, C, and E would be the same. The increased visitation to the Jamestown area and the development at Neck of Land and on the Island would result in major impacts to NPS operations. All phases of the Jamestown operation would need substantial increases in both staff and funding in order to accomplish the Jamestown mission. Alternative D would have the least impact on the NPS operations but would require some additional staff and funding. All of the alternatives would provide increased visitor contact and an enhanced interpretive experience.

For the APVA, impacts to operations would vary from minor to moderate. Under all alternatives, the APVA believes the volunteer program could be expanded to help provide additional visitor assistance.

Buildings and Utilities

All of the action alternatives require improvements to the utility infrastructure at Jamestown. Taken together, the improvements required under each alternative would result in a comprehensive and modern system of water/sewer, stormwater, electrical, and communications infrastructure. In addition to serving the utility needs of specific improvements, the development of a more complete system would be a beneficial cumulative impact.

Transportation and Site Access

Future year evaluations for the action alternatives determined that traffic operations on the Colonial Parkway would operate at acceptable levels even during peak season, design day conditions with all action alternatives. The presence or lack of a Colonial Parkway shuttle would not significantly change traffic operations or levels of service. Parking demand would also be accommodated in all alternatives studied.

The water taxi service proposed in Alternatives B, C, and E has significant potential to attract ridership between the Neck of Land parcel, Jamestown Island and, in Alternatives B and C, Powhatan Creek Overlook. The NPS would need to determine how the cost for this service would be paid, and whether all or a portion of the projected operational costs would be subsidized in an increase in admission to the major Island attractions.

With Alternatives B, C, and E, the development of a comprehensive wayfinding sign program, including the use of variable message signs, would be needed to minimize visitor confusion and to maximize the use of parking lots at both the Neck of Land parcel and on Jamestown Island.

Impairment

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to preserve park resources and values. However, the laws do give the

NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute “impairment” of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources and values. An impact to any park resource or value may constitute impairment.

An impact would be more likely to constitute impairment to the extent it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by adjacent landowners, concessionaires, contractors, and others operating in the park. Impairment of park resources and values is strictly prohibited unless provided for by law.

While there would be impacts to both natural and cultural resources at Jamestown from each of the action alternatives, no impairment of resources or values would result from implementation of any of the action alternatives. Further, impacts would be minimized through mitigation, monitoring, and careful design.

The only potential threat of impairment is contained in the No Action Alternative; in which continued housing of the NPS portion of the Jamestown collection in the basement of the Visitor Center could lead to impairment through damage and/or destruction of the collection.

CONSULTATION AND COORDINATION

Public involvement was an ongoing and key component of this DCP/EIS process. Every attempt was made to include the public; appropriate federal, state, and local agencies; and other interested parties in the Jamestown Project planning and design in a meaningful and productive manner.

The public involvement approach had six major elements:

- A visioning process;
- Intensive charrette;
- Project scoping process;
- Briefings for NPS and APVA staff, as well as local, state, and federal agency officials;
- Newsletters; and
- Public meetings.

From the inception of the Jamestown Project, the study team recognized that the greatest challenge to identifying feasible alternatives was not overcoming engineering and permitting hurdles but designing alternatives that could reconcile competing visions for Jamestown Island while avoiding and/or protecting sensitive cultural and natural resources. To respond to this challenge, the team designed a public involvement approach that brought all the major stakeholders, agencies, and a distinguished group of scholars, historians, archaeologists, architects, museum planners, and educators into the study process as contributors. These constituencies worked with the study team to direct the planning efforts toward alternatives that could enhance research and educational opportunities, improve the

quality of the visitor experience, and protect the Jamestown collection while preserving the tranquil beauty and character of Jamestown Island.

The *Draft Development Concept Plan/Environmental Impact Statement* for the Jamestown Project was available for public review for 60 days. Copies of the document were available for public review at local libraries and at both the Yorktown and Jamestown Visitor Centers. Documents were also sent to interested individuals, agencies and organizations. Approximately 30 days into this review, public meetings were held on September 12, 2002 to solicit comments and inform the public of the Preferred Alternative. Press releases and public notices were used to announce the availability of the document as well as the public meeting times. Approximately 60 people attended the meetings, while 91 formal comments were received via email, letter, or at the public meeting.

Substantive comments and responses to those comments are included within “Chapter 5: Consultation and Coordination.” Approximately 18 federal, state, and local agencies and organizations provided comments on the document. Letters and emails were received from the U.S. Environmental Protection Agency, Region III; U.S. Fish and Wildlife Service; U.S. Army Corps of Engineers; U.S. Coast Guard; Federal Highway Administration; Virginia Department of Conservation and Recreation; Virginia Department of Environmental Quality; Virginia Department of Agriculture and Consumer Services; Virginia Department of Health; Virginia Department of Transportation; Virginia Marine Resources Commission; Virginia Department of Mines, Minerals, and Energy; Virginia Department of Forestry; Chesapeake Bay Local Assistance Department; Virginia Department of Historic Resources; Virginia Tourism Corporation; James City County; James River Association; and the Williamsburg Area Bicyclists. In addition, approximately 76 individuals provided formal comments: 48 of which were part of a campaign to allow non-motorized personal watercraft access at Jamestown.

This *Final Development Concept Plan/Environmental Impact Statement* responds to and incorporates the public comments received on the draft document. Every comment was considered carefully by the planning team. In general, the majority of the comments received were in support of the Preferred Alternative (Alternative B). Agency comments offered guidance on implementing the proposed actions and ways to successfully mitigate and minimize potential impacts to resources. Several individuals (5) gave testimony at the public meeting that they were for the No Action Alternative because they were concerned with the effect of proposed actions on existing boat traffic and water skiing within Back River.

After a 30-day no-action period, a Record of Decision (ROD) will be prepared to document the selected alternative and set forth any stipulations for implementation, thus completing the requirements for the National Environmental Policy Act of 1969, as amended. Signed copies of the U.S. Fish and Wildlife Biological Opinion on impacts to the bald eagle and sensitive joint-vetch, the Statement of Findings for Wetlands and Floodplains, and the Programmatic Agreement for impacts to cultural resources will be appended to the ROD.

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Introduction: Purpose & Need for Action

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1 Introduction: Purpose & Need for Action

1.1 INTRODUCTION

The Association for the Preservation of Virginia Antiquities (APVA) and the National Park Service (NPS) developed a partnership to jointly **research, protect, and present** to the public the resources at Jamestown Island (Appendix A). The APVA and NPS would like to capitalize on their strong partnership and recent discoveries to enhance educational and research opportunities and connect the visitor more closely with the site, its past inhabitants, and their experiences. In order to reach and educate the broadest possible audience, the goals of the Jamestown Project are to:

- Improve the Quality of the Visitor Experience
- Protect the Jamestown Collection and Associated Archival Materials
- Enhance Research and Educational Opportunities
- Strengthen the APVA and NPS Partnership

Under the National Environmental Policy Act of 1972 (NEPA), the National Park Service is required to prepare environmental documentation to assess the potential impacts of a proposed plan and various alternatives to that plan. Building on previous NPS and APVA management documents and interpretive plans, the purpose of this document is to provide a Development Concept Plan/Environmental Impact Statement (DCP/EIS) that evaluates alternative strategies to meet the goals of the project. These strategies involve an updated interpretive experience; the improvement of facilities (including the 1956 Visitor Center, collections storage, and

parking); the addition of comfort/hospitality services and new interpretive venues; and enhanced and multimodal transportation options. Based on NPS management policies and guidelines, and federal, state, and local regulations, the proposed alternatives were designed in consideration of cultural, natural, and socioeconomic resources.

This Final DCP/EIS represents the combined efforts of many. Stakeholder meetings were held at various stages in order to build the framework for subsequent planning steps, define the issues that need to be resolved, and enlarge the community of people working on the planning process. Stakeholder groups and individuals were also consulted during the development of the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b), which helped establish the basic interpretive principles and aims for the project. Both internal and external groups, as well as key APVA and NPS staff were consulted in order to provide their vision for Jamestown and checks and balances of the proposed alternatives. Key groups included members of the Virginia Indian and African American communities; neighbors of Jamestown; local churches; the Colonial Williamsburg Foundation; the Jamestown-Yorktown Foundation; scholars, archaeologists, biologists, and historians; and representatives of local, state, and federal agencies. In addition, public and agency scoping meetings have been held throughout the preparation of this document to provide for community input as well as adherence to regulatory requirements.

1.2 INFORMATION ABOUT JAMESTOWN

For both the APVA and the NPS, the purpose and primary significance of Jamestown is to preserve, interpret, and promote the history of the first permanent English colony in North America. Jamestown is also historically important because it was the place where many peoples from three continents (North America, Africa, and Europe) came together to form a new society. They shaped each other's lives, adopted each other's ways, and established laws, customs, and a language that Americans use today. In addition, the meeting of America's first representative legislature occurred at Jamestown in 1619, and Jamestown served as the first capital of the colony of Virginia (1607-1699).

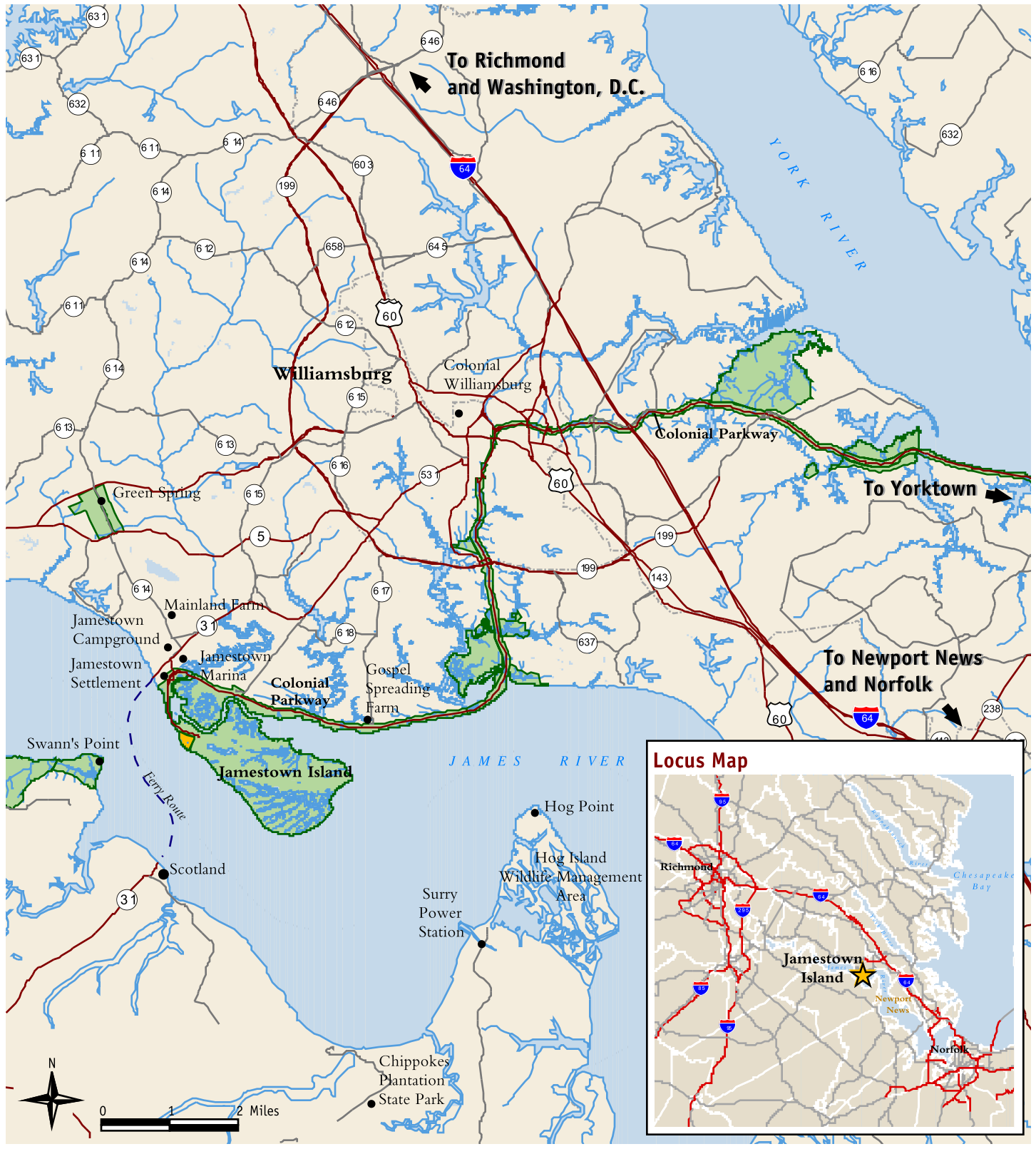
Figure 1-1 depicts the location of the Jamestown Project area, which is in James City County, Virginia, at the western end of Colonial National Historical Park (Colonial NHP). The project site is composed of Jamestown Island, approximately 1,500 acres that include the Townsite (Old Towne and New Towne) and the Loop Drive, and approximately 300 acres of adjoining land owned by the National Park Service. These adjoining areas are more commonly referred to as Glasshouse Point, Neck of Land, and the adjacent segment of the Colonial Parkway (Figure 1-2).

Because of its location in relation to the James River, more than half of the Jamestown Project area is covered by wetlands and open-water habitats, which include Pitch and Tar Swamp, Powhatan Creek, Sandy Bay, Back River, The Thorofare, Kingsmill Creek, and Passmore Creek. A mixed pine/hardwood forest covers the majority of the remaining natural areas.

Areas surrounding the project site include: Jamestown Settlement (the Commonwealth of Virginia's living history museum), the Jamestown Campground, and the Jamestown-Scotland Ferry landing to the northwest; Powhatan Creek, the

Jamestown Marina, and residential developments to the north; Gospel Spreading Farm to the northeast; and the James River to the west, south, and east. Areas of importance across the James River in Surry County include: Chippokes Plantation State Park, the Surry Power Station, the Jamestown-Scotland Ferry landing, and the Hog Island Wildlife Management Area. Colonial Williamsburg is located northeast of Jamestown approximately eight miles along the Colonial Parkway (Figure 1-1).

The APVA, a non-profit 501(c)(3) organization founded in 1889, acquired 22.5 acres on Jamestown Island in 1893, while the National Park Service acquired 1,500 acres in 1930 during the inception of Colonial NHP. By proclamation of the President, Colonial NHP was originally established on July 3, 1930 as Colonial National Monument to commemorate the beginning and ending of British colonial experience in North America. This law, P.L. 71-510, 46 Stat. 855 (Appendix B), authorized the establishment of boundaries to include "historic structures and remains thereon and for the benefit and enjoyment of the people, sufficient of the areas of Jamestown Island, parts of the City of Williamsburg, and the Yorktown Battlefield, all in the state of Virginia, and areas for highways to connect said island, city and battlefield." On June 5, 1936, P.L. 74-666, 49 Stat. 1483 (Appendix B), redesignated Colonial National Monument as Colonial National Historical Park. This law also authorized the acquisition of part of Green Spring plantation, former home of Governor William Berkeley, a significant figure in the civic development and settlement expansion on the York-James Peninsula, the land area between the York and James Rivers that includes Jamestown, Williamsburg, and Yorktown. With regards to Jamestown, Berkeley's ties as royal governor helped transform the area into the commercial center of colonial America and the political center of the Virginia colony.



Legend

- Colonial National Historical Park
- Association for the Preservation of Virginia Antiquities

Figure 1-1: Location and Surrounding Areas



Legend



Colonial National Historical Park

Association for the Preservation of Virginia Antiquities

Figure 1-2: The Jamestown Project Study Area Regions and Facilities

Other relevant legislation includes the establishment of two federal commissions to guide planning, fundraising, and promotion for Jamestown anniversary events. The first commission was established in 1953 for the 1957 celebration. In December 2000, a second federal commission was authorized through P.L. 106-565, 114 Stat. 2812 (Appendix B) to coordinate with the Commonwealth of Virginia on plans for the 400th anniversary in 2007. Its members represent a cross section of state and federal officials as well as private citizens whose charge is to facilitate the commemoration plans on a national and local scale.

In preparation for the upcoming 400th anniversary, the nearby Jamestown Settlement (the Commonwealth of Virginia's living history museum) is currently improving its facilities, including a new education building, a welcome café, parking, and a new museum and monument. In addition, plans are being developed, in consultation with the National Park Service and the APVA, for the relocation of State Route 359, which now separates the Settlement from its parking lot and connects Jamestown Road (Route 31) to the Colonial Parkway.

As noted above, both the APVA and the National Park Service have been preserving, researching, and interpreting the rich history of the Jamestown colony. These organizations have similar missions as established by their management guidelines. As stated in their *Agenda for Institutional Development* (1991), "the Association for the Preservation of Virginia Antiquities preserves, interprets, and promotes real and personal property relating to the history and people of Virginia. It serves as an educational and cultural resource for its membership, the general public, and special audiences." At Jamestown specifically, the APVA has placed an emphasis on the Virginia Company period, 1607-1624. Equally important to the APVA is the goal to learn about 17th century town growth at Jamestown and to interpret the history of the APVA's efforts to preserve Jamestown. In addition,

the Association's educational mission for Jamestown is to develop a variety of public programs to serve the general public as well as scholars and other special-interest groups. Similarly, as stated in the *Strategic Plan for Colonial National Historical Park* (Colonial NHP 2000a), the NPS mission for Colonial NHP is "to preserve the cultural, scenic and natural resources of Jamestown, Yorktown, Green Spring and related areas, to interpret the colonial era from 1607 to 1781, and to maintain the Colonial Parkway and its surrounding resources for the benefit and enjoyment of the people."

Because the APVA and the National Park Service are committed to the resources at Jamestown and to providing their visitors with a coordinated, seamless, enjoyable experience, they developed a single mission statement for the integrated management of Jamestown: "... the APVA and NPS as partners will build upon our strong tradition as stewards of Jamestown's cultural and natural resources. We are committed to reaching the broadest possible audience through preservation, research, scholarship, and education. We are committed to providing a high quality interpretive experience for each visitor to Jamestown" (NPS 1996c).

1.3 PLANS OUTLINING MANAGEMENT GOALS FOR JAMESTOWN

The APVA and the National Park Service each have their own internal management plans and guidelines, which dictate how their organizations operate. Some of these plans are specific to the organizational management of Jamestown. Together, these plans and guidelines form the basis and background for the Jamestown Project DCP/EIS. The project goals must be in accordance with these fundamental guidelines.

1.3.1 Joint Management Plan for Jamestown: Initial Concepts

The APVA and the National Park Service both administer Jamestown Island, and in preparation for the 400th anniversary of the founding of Jamestown, a “joint management plan” was developed in 1996. The plan covers “preservation, interpretation, visitor use, and visual resources within the townsite.” This plan capitalizes on the strengths of each organization and focuses on improvements in resource protection, research, visitor services, and facility development.

In the course of developing the plan, the partners identified several planning issues:

- Current NPS curatorial space in danger of flooding;
- Curatorial space must accommodate additional artifacts from future excavations;
- Structures are needed to protect and display ongoing archaeological digs; and
- A state-of-the-art curatorial/research center is needed to accommodate the research and increased interest of outside scholars and institutions in 17th century studies.

To address these collections issues, as well as to enhance the visitor experience, the National Park Service and the APVA jointly developed a list of management goals for Jamestown. Management goals related to the Jamestown Project include:

- Providing an integrated, high-quality visitor experience;
- Interpreting Jamestown as an early example of the American historic preservation movement;
- Maximizing the visual and historical integrity of the visitor experience;
- Interpreting the history of the site as a continuum, especially from 1607-1699;

- Providing for state-of-the-art storage, research, processing, curation, and exhibition of the collections of Jamestown’s archaeological artifacts, archival, and photographic materials;
- Designing, constructing, and implementing a full-service museum/educational center for ongoing 17th century studies;
- Preserving cultural and natural resources and making them accessible in ways safe and enjoyable for visitors; and
- Continuing and strengthening the joint management of Jamestown by the APVA and NPS through (1) continuing to share a single entrance fee, (2) cooperating to avoid duplication of programs, and (3) cooperating to improve promotion and marketing of Jamestown so as to improve visitation.

One idea considered but rejected by the collaborators was the development of a new curatorial/research facility off Jamestown Island. Both partners agreed that the artifacts and research facilities should remain close to the Townsite because moving them away would disconnect the “heart and soul” of Jamestown.

Although the *Joint Management Plan for Jamestown* (NPS 1996c) has not been formally adopted or approved by the Secretary of the Interior, the goals were developed in coordination with existing objectives established in management plans of both organizations and therefore reflect the overall objectives of both organizations. In addition, the goals set forth in this document are reiterated in several other NPS and APVA management documents.

1.3.2 General Management Plan for Colonial National Historical Park

The National Park Service prepared the *General Management Plan* (GMP) for Colonial NHP in 1993 to guide its management for the next 10 to 15 years.

The plan focuses on refining existing conditions and includes improved interpretation and visitor services, with close monitoring of actions to ensure protection of cultural and natural resources, and close cooperation with state and local governments and other major groups. In addition to the goals regarding visitor experience and historic resource protection included in the *Joint Management Plan for Jamestown* (NPS 1996c), the GMP for Colonial NHP calls for consideration of the establishment of a public transportation system to Jamestown Island; limiting disturbance in undeveloped areas on Jamestown Island in order to protect the natural resources; and increasing bicycle and pedestrian traffic with a separate bicycle/pedestrian trail within the Colonial Parkway corridor. Regarding the existing Visitor Center and the NPS collections housed there, the GMP suggested replacing it with a facility situated outside and away from the original Townsite but still on the Island. The existing parking lot was proposed as a potential location for the new Visitor Center.

1.3.3 An Agenda for Institutional Development

The APVA prepared *An Agenda for Institutional Development* (1991) to augment its mission to include not only simple preservation, but also to serve as an “educational and cultural resource for its membership, the general public, and special audiences.” Based on this shift toward education and research, the APVA wants to expand their role in the preservation and museum communities, while increasing the number and quality of educational opportunities through lectures, workshops, publications, and interpretive experiences. The core mission remains, as reflected in the *Joint Management Plan for Jamestown* (NPS 1996c), the preservation of the properties under its care, the management of the collections located at each property, and the interpretation of these artifacts.

1.3.4 Jamestown Rediscovery™ Archaeological Project

This 10-year plan for archaeological research and analysis guides the archaeological effort undertaken by the APVA at Jamestown (APVA 1993b). The main goal of the APVA Jamestown Rediscovery™ project is to learn more and interpret for the public, through archaeological remains, the nature and extent of the early years of settlement at Jamestown, especially the earliest fortified town, and the subsequent growth and development of that town. An additional goal of the Jamestown Rediscovery™ project is to develop new space for a meeting room, exhibits, educational programs, and conservation space to augment the newly built space for the permanent curation and study of APVA artifacts and archaeological records. Along with the park’s GMP, also prepared in 1993, this document provided a starting point for discussions between the APVA and the National Park Service regarding the joint management of Jamestown Island.

1.3.5 Jamestown Archeological Assessment

From 1992 to 1996, the NPS conducted the Jamestown Archeological Assessment (JAA), which involved a cooperative agreement with the Colonial Williamsburg Foundation and the College of William and Mary. Together, they conducted the first ever comprehensive and systematic archeological survey of the entire Island. The JAA research established the relationship of the natural environment to historical events, documented four centuries of land ownership patterns, and placed the Island into its historical context.

1.3.6 Long Range Interpretive Plan, Jamestown

Colonial NHP prepared the *Long Range Interpretive Plan* (LRIP) for Jamestown (2000b) to provide a five-year vision for Jamestown focused on interpretive goals and objectives, themes, audiences, and desired

visitor experiences. The plan identifies Jamestown's needs as seen by the Colonial NHP staff for a number of areas, including library, collections, and research needs; staffing needs and costs; and visitor amenities such as interpretation of cultural and natural resources, recreation, and refreshments. More importantly, the LRIP sets out an implementation plan for addressing and correcting the perceived shortcomings of the Unit and for improving program administration and effectiveness.

1.3.7 Management Policies 2001 and the National Park Service Strategic Plan

Among documents produced more recently by the National Park Service to establish goals and management objectives, *Management Policies 2001* (2000d) and the *National Park Service Strategic Plan* (2001d) set department-wide policy based on the Organic Act of 1916 and the Government Performance and Results Act (GPRA) of 1993. The *NPS Strategic Plan* formalized a system-wide set of objectives including preserving park resources, providing for public enjoyment and visitor experience, enhancing recreational opportunities, strengthening partnerships, and ensuring organizational effectiveness.

Most important, the *Management Policies 2001* defines the NPS interpretation and use of the terms “impairment” and “derogation,” as noted in the Organic Act and the General Authorities Act, as amended by the Redwood Amendment. The terms are interchangeable and define a single standard for the management of NPS properties. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to preserve park resources and values. However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, as

long as the impact does not constitute “impairment” of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgement of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources and values. An impact to any park resource or value may constitute impairment. An impact would be more likely to constitute impairment to the extent it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by adjacent landowners, concessionaires, contractors, and others operating in the park. Impairment of park resources and values is strictly prohibited unless provided for by law.

1.3.8 Strategic Plan for Colonial National Historical Park Fiscal Year 2001-2005

Based on the goals established by the *NPS Strategic Plan* (2001d), Colonial NHP prepared its own strategic plan in 2000 to guide the management of the park during the fiscal years 2001 through 2005 using anticipated funds. This plan included specific,

quantifiable recommendations for preserving park resources, improving visitor experience, enhancing recreational opportunities, and strengthening partnerships at Jamestown. These goals include: stabilizing 100% of the park population of federally listed threatened and endangered species not requiring NPS recovery actions; meeting 74% of preservation and protection standards for Jamestown museum collections; satisfying 96% of visitors to Jamestown with appropriate park facilities, services, and recreational opportunities; and approving and implementing 80% of the plans for the 400th anniversary of Jamestown by September 30, 2005.

1.3.9 Resource Management Plan for Colonial National Historical Park

Colonial NHP has developed a *Resource Management Plan* (RMP) to provide direction and establish priorities for the protection and preservation of both cultural and natural resources within that park. The *Resource Management Plan for Colonial National Historical Park* (Colonial NHP 1999) functions as a broad action plan, which defines resource management issues and describes what management, monitoring, or research actions are needed to restore damaged resources, mitigate current adverse impacts, and protect sensitive resources from current or future threats. A park's RMP is typically updated every two to four years.

The RMP for Colonial NHP incorporates management goals defined in the *Joint Management Plan* (NPS 1996c) and the park's *General Management Plan* (NPS 1993b). Additional natural and cultural resource management goals include:

- Protecting rare, threatened, and endangered species as a part of the naturally evolving ecosystem;

- Restoring, protecting, and preserving natural watershed conditions and processes, and native plant and animal communities that are characteristic of the Coastal Plain;
- Achieving a more thorough understanding of cultural and natural processes through research and monitoring in order to guide management activities and interpretation;
- Providing excellent interpretation, environmental education, and outreach programs to foster public understanding, appreciation, involvement and support;
- Developing and maintaining cooperative protection strategies with federal, state and local government agencies, community groups, corporations, and individuals to protect the integrity of the natural and cultural environments within and surrounding the park;
- Developing, operating, and maintaining park facilities in a sustainable manner; and
- Conducting park operations in a way that minimizes impacts to natural and cultural resources.

In addition, the *Resource Management Plan* briefly documents existing natural and cultural resources at Colonial NHP and lists the cultural and natural resource management programs and priorities. Detailed project statements and funding needs are also discussed in the plan.

1.4 RELATIONSHIP TO OTHER PLANS AND STUDIES

In addition to the APVA and NPS plans outlining organizational management and management goals specific to Jamestown, several ongoing and completed plans and studies are also related to the Jamestown Project DCP/EIS.

1.4.1 Green Spring Draft General Management Plan Amendment and Environmental Impact Statement

This Draft GMP Amendment/EIS presents and analyzes three alternative plans for the management of the Green Spring unit of Colonial NHP (NPS 2001b). This historically rich archaeological site of approximately 200 acres located three miles from Jamestown was acquired by the National Park Service in 1966. As the home of Sir William Berkeley, one of the most influential governors of Virginia in the 17th century, Green Spring represents the expansion of British society beyond Jamestown proper and is integral to the story of the first permanent English settlement in North America.

Taken from the overall objectives of the park and consistent with management goals at Jamestown, four mission goals would guide the management of Green Spring. These goals fall into four overall categories:

- Resource Management and Landscape Treatment
- Interpretation and Visitor Experience
- Visitor Use and Park Facilities
- Partnerships and Cooperative Actions

Based on these mission goals, three alternative plans for Green Spring's management are presented including a no action alternative and two action alternatives. The preferred action alternative, "The Interpretive Landscape of Green Spring," utilizes the Green Spring landscape to depict a 17th century plantation. Visitors would be encouraged to join archaeologists and scholars in their historical discovery of the site.

One important consideration for the proposed action alternative is State Route 614, Centerville Road. In this alternative, Centerville Road would be permanently closed to traffic—except for emergency use by public safety vehicles and other emergency uses—since it detracts from the safety and quality of the environment and is inconsistent with the landscape character.

1.4.2 Shoreline Management Plan for Jamestown Island, Powhatan Creek, Sandy Bay, Back River, The Thorofare, and James River Shorelines

The *Shoreline Management Plan* (Hardaway et al. 1999) addresses a mutual desire of federal and state agencies to develop cooperative projects that improve water quality and enhance wetland habitat in the Chesapeake Bay area, while preventing the loss of significant resources, particularly those archaeological sites near the water's edge. The study presents recommendations that address shoreline erosion (due mainly to storm activity) and National Park Service objectives at the various sites examined. The impacts of "doing nothing" to the shoreline are also assessed.

Six structure types that are relatively non-intrusive to natural surroundings yet effective within the context of long-term shoreline erosion control are recommended. These include revetments, two sills with different crest elevations, low broad-crested breakwaters, and two larger breakwaters with different crest elevations. The current DCP/EIS for the Jamestown Project should consider the proposed and underway actions in order to avoid conflicts with this *Shoreline Management Plan*. The "Surface Waters" sections in "Chapter 3: Affected Environment" and "Chapter 4: Environmental Consequences" contain more detailed information related to this plan.

1.4.3 Alternative Transportation System Study

Based on the recommendation from the 1993 Colonial NHP *General Management Plan* to consider establishing a public transportation system, the park participated in the department-wide *Federal Lands Alternative Transportation System Study* (Cambridge Systematics, Inc. 2001b). According to the study, "Colonial NHP appears to be an extremely strong and viable candidate for the initiation of ATS [alternate transportation system] services designed

for large-scale visitor movement. Indeed Colonial NHP might well serve as a national model of the manner in which such services, utilizing best available vehicle technologies, could be provided in a historic, multi-unit urban environment.”

As a result, the park prepared an *Alternative Transportation System Study* (BRW and Cambridge Systematics 2001) to evaluate and make recommendations for a successful, long-term alternative transportation system. Study goals include lessening the impact of increased automobile traffic, providing enhanced visitor experiences, and protecting the structural integrity of the Parkway and structures along the roads. To do this, the study proposes a multi-jurisdictional regional public transportation system to integrate local ATS options in the Jamestown, Williamsburg, and Yorktown areas using fixed-route/fixed-schedule bus routes and a central transit transfer center; providing alternative transportation services along the parkway to connect Jamestown Island, Colonial Williamsburg, and Yorktown/Yorktown Battlefield; a visitor shuttle system to serve the tour roads at the Yorktown Battlefield and on Jamestown Island; and a multimodal opportunity at the Jamestown end of the park through the use of water taxis and bicycles.

Phase I of the ATS study was completed in 2001 and assessed the potential for the establishment of an Alternative Transportation System in the park. The second phase of the ATS study will provide additional data and analysis that will help refine the preliminary recommendations of the initial planning study and establish base information and create a foundation for the park to move forward with an environmental compliance process so it can implement the recommended system over the next 3-5 years.

Data and analysis to be carried out in this second phase include ascertaining transit ridership potential; developing reasonable routings for the tour roads and the Parkway; reviewing the appropriateness of vehicle and fuel types; assessing

the needs for operations, maintenance and facilities; and financing. A marketing strategy and orientation plan for visitors on the use of the ATS system will also be developed during this next phase.

1.5 JAMESTOWN PROJECT PLANNING AND INTERPRETIVE DOCUMENTS

In addition to general management documents, the APVA and National Park Service have prepared planning documents specific to the Jamestown Project.

1.5.1 Draft Master Plan for Jamestown

In preparation for the 400th anniversary of the founding of Jamestown in 2007, the APVA and NPS developed a *Draft Master Plan* (1999) to identify needed improvements to the facilities and programs at Jamestown and to coordinate activities with the Jamestown-Yorktown Foundation (Jamestown Settlement) for 2007 and beyond, thus creating a “One Jamestown” for the visitor.

In preparing this document, the planning team reexamined the *Joint Management Plan* (NPS 1996c) and the existing objectives of each organization. They identified several problems at Jamestown involving risks to collections; inadequate staffing and interpretation; and out-dated buildings, technology, and infrastructure. In addition, the two locations of “Jamestown” – the Island and the Settlement – are not clearly explained, thus leading to visitor confusion and frustration.

To alleviate these problems and issues, the *Draft Master Plan* develops several concepts and goals related to coordination and cooperation with the Jamestown Settlement, access and multi-modal transportation to both areas, improvement of the interpretive experience, enhanced research and educational facilities, and the addition of visitor amenities. Important aspects of the plan include:

- Removing the existing Visitor Center from the Townsite landscape and the 1607 James Fort site;
- Using the Dale House to provide visitor amenities (food, beverage, rest rooms);
- Telling the story of Jamestown through individual experiences of historic people;
- Constructing the Discovery Center, which would house both visitor and research facilities, as well as both the APVA and NPS collections;
- Providing bus services from Colonial Williamsburg to both Jamestown Island and the Jamestown Settlement; and
- Providing “boat landings,” which serve as a multi-modal transportation transfer point and allow visitors to move between Jamestown Settlement, Jamestown Island and the Neck of Land area using the boat, bike/pedestrian trails, or trams.

Although this document was not prepared under the guidelines of NEPA, it helps provide a basis for the current Jamestown Project DCP/EIS.

1.5.2 Jamestown Island Interpretive Plan

Haley Sharpe Design, in cooperation with the APVA, NPS, other planning team members, and various stakeholder groups and individuals, developed an interpretive plan for Jamestown Island as a precursor to the DCP/EIS. The *Jamestown Island Interpretive Plan* (2001b) is based on an earlier document, *Goals for the Visitor Experience* (Haley Sharpe Design 2000b), which establishes the basic principles and interpretive aims for the project and identifies 35 themes, covering all aspects of the site’s history and resources. In addition, Haley Sharpe Design also produced a discussion document of the work-in-progress (Haley Sharpe Design 2001a), which details the consolidated interpretive themes; presents five alternative visit concepts; examines visitor transportation, routing,

and flow possibilities; and explores different aspects of the potential visitor experience.

Using the overall concept, “Jamestown is the birthplace of modern American society,” the *Interpretive Plan* identifies eight interpretive themes (from the original 35) as focal points for the potential visitor experience: Atlantic Worlds, Struggles for Survival, Economic Experiments, Fort to ‘Cittie,’ A New Society, Jamestown and Beyond, Discovering the Past, and Legacies. Overarching these themes are the visit/story characteristics: Exploration and Discovery, New Beginnings, and Adaptation and Evolution, which should be reflected throughout the interpretive experience. In addition, the document identifies interpretive sites at Jamestown related to each theme, and they are mapped to show their relationship to existing resources.

To define the character of the visitor experience and present each of the interpretive themes, the plan also outlines an interpretive approach. The fundamental aim of the interpretive approach is to provide a sense of “Discovery” and engage the visitor as closely as possible with the site. The physical presence of evidence on the Island, together with the ongoing and active research processes that examine the evidence, help connect the visitor more closely with past people and their experiences. Based on the evidence presented, the visitor will be encouraged to make “discoveries” at Jamestown, formulate theories, and investigate the resources using imagination.

Key to the success of this approach is presenting various and contrasting perspectives of the same events. The experience of different people from different cultures, both key and little known personalities, would structure the narrative of the interpretive experience and provide the visitor with a deeper understanding and appreciation of the history of Jamestown. The following historical perspectives are essential to the story of Jamestown: identity and motivation, the interplay of cultures, Jamestown in the context of the Atlantic World, the relationship to the

environment, and the roles of men, women, and children.

The plan also presents specific ideas to support the interpretive approach, engagement with the site, the concept of “Discovery,” the proposed themes, and the notion of making choices. Most importantly, these ideas include:

- The approach to the Island and a clear sense of arrival,
- Interpretive anchors at the east and west ends of the site,
- Some collections displayed close to the historic core area to show their relationship to the Townsite landscape and 1607 James Fort site,
- Experimental archaeology sites and focused interpretive points, and
- Site overlooks.

These are considered essential elements of the interpretive approach, and they form the basis for the physical expressions of that approach (i.e. the alternatives presented in this DCP/EIS).

1.6 PURPOSE OF AND NEED FOR ACTION

Jamestown, the birthplace of modern American society, is a world class cultural and historic treasure that needs to be promoted, explored, and fully presented to communicate its significance in history. Often overlooked, Jamestown Island is the site of the first permanent English colony in North America, predating Plymouth, Massachusetts, by more than a decade. It marks the time and place of the beginning of the history of this nation.

The site is historically significant because it preserves the landscape and artifacts in their original location; and is culturally significant, marking the place where many peoples from three continents (North America, Europe, and Africa) came together to form a new society. The meeting of

America’s first representative legislature occurred at Jamestown in 1619, and Jamestown served as the first capital of the colony of Virginia (1607-1699). It is also the origin site of institutions, laws, and customs that formed the American experience.

Jamestown Island is an archaeological wealth of artifacts and other evidence of human activity dating back over 12,000 years. It presents a unique opportunity for both visitors and researchers: there are very few 17th century sites with an existing archaeological collection and potential for additional collection that is within sight of its context. This highly unusual situation not only provides researchers and archaeologists with immediate access to information and materials processing, but it greatly enhances the visitor experience and their education. Because Jamestown contains many unstudied archaeological resources, the site, an active archaeological dig, has huge possibilities for visitors to watch their discovery unfold. With this ongoing research and uncovering, the site will constantly evolve and grow in its body of research and discovery.

There are many reasons that Jamestown is not being fully recognized, understood, presented, or explored. These have been broadly categorized into three main reasons:

Lack of Site Recognition and Education

- The general public does not understand Jamestown’s significance. It has become a place to visit if you have an hour to spare; it is not a true destination.
- The existing visitor experience does not communicate the national and world importance of the site (origin of American society, legislature, institutions, laws, and customs), and the complex stories of the site’s importance are not fully communicated or interpreted.

- There is no clear distinction between Jamestown, the original site, and Jamestown Settlement, the Jamestown-Yorktown Foundation's living history museum. Visitors become easily confused by the differences and relationships between the two sites or they do not realize that both sites exist, and they choose to visit only one or the other rather than both.
- There is a lack of orientation to and within the site itself. There is no clear guidance for the visitor as to what Jamestown has to offer and how best to experience it.

Limited Visitor Engagement and Understanding

- The site does not convey the importance of the continued stewardship of the property, nor does it pique the visitor's interest to the yet undiscovered site resources to be identified through research, as well as the ongoing archaeological discoveries.
- Many elements of the visitor experience have not changed in 50 years, while knowledge about the site, visitor expectations, and available technology have changed dramatically.
- The visitor is not enticed nor drawn to explore the entire historic site or outer Island with its wealth of flora and fauna and well-preserved historical landscapes.

Inadequate Operations and Outdated Facilities

- Due to the site's limited presentation and facilities, the immense wealth of both cultural and natural resources is not adequately revealed to the public.
- The valuable NPS-owned portion of the Jamestown collection is housed in poor storage facilities in the basement of the

Visitor Center. This area has limited climate control features and is subject to flooding. Additionally, yet unearthed resources are also at risk due to flooding and erosion problems. Unfortunately, the safety of the NPS-owned portion of the Jamestown collection is not secured for future generations.

- The Jamestown collection is not located in the same facility: the NPS portion is located in the Visitor Center and the APVA portion is in the Jamestown Rediscovery™ Center. These conditions inhibit the sharing of information between the APVA and NPS.
- Operationally, the Jamestown site is not effective in terms of visitor comfort, enjoyment, and distribution, storage, and display of collections.
- Due to budget constraints, current staff levels are inadequate to meet not only visitor needs, but also research, education, and resource needs as well.

To preserve its place as a future resource in the historical and cultural richness of the country, Jamestown needs to be prized and placed in the forefront of public awareness. As currently presented, Jamestown Island is not a fitting memorial to all the peoples who, through trial and tribulation, forged a new society at the site that became a new nation.

Furthermore, the facilities and exhibits are called into question as to the worthiness and/or adequacy for a site of such national and international importance (Figures 1-3 and 1-4). This demands *significant* remedial action. The Jamestown Project presents a timely opportunity to protect a historic resource while promoting its importance and providing a unifying experience for visitors to the Jamestown area.



Figure 1-3: Existing 1956 Visitor Center Conditions



Figure 1-4: Existing Visitor Amenities Conditions

Based on Jamestown's importance to United States history and its unending opportunities for research and discovery, the overriding purpose of the Jamestown Project is for the APVA and NPS to jointly **research, protect, and present** to the public the resources at Jamestown.

The APVA and NPS would like to capitalize on their strong partnership and recent discoveries to enhance educational and research opportunities and connect the visitor more closely with the site, its past peoples, and their experiences. In order to reach and educate the broadest possible audience, the Jamestown Project goals are to:

- Improve the Quality of the Visitor Experience
- Protect the Jamestown Collection and Associated Archival Materials
- Enhance Research and Educational Opportunities
- Strengthen the APVA/NPS Partnership

Specific project needs, goals, and objectives related to the purpose of the Jamestown Project are listed below.

1.6.1 Improve the Quality of the Visitor Experience

During a recent visitor survey at Jamestown, groups were asked, "If you were a manager planning for the next five years at Jamestown Island, what would you propose?" The majority of the responses focused on interpretive services and facilities, including more living history, education, and public transportation. In addition, visitors suggested an improved self/audio tour and the addition of an interactive archaeological program. Clearly, in order to educate the public, the presentation of findings must be improved, which will in turn improve the quality of the visitor experience.

Generally, needs and goals related to the visitor experience fall roughly into five categories:

- Transition and Orientation
- Visitor Understanding
- Site Interpretation and Exhibits
- Facilities and Comfort
- Transportation

1.6.1.1 Transition and Orientation

As mentioned earlier, visitors are confused long before they reach Jamestown Island because the difference between Jamestown Settlement, the living history museum, and Jamestown, the original historic site, are not clear to them. Unfortunately, there are no facilities or locations that serve an orientation function to visitors in the Jamestown area. Jamestown Settlement's intense and aggressive marketing program also amplifies visitor confusion. Visitors can find information on-line, in local newspapers, at Colonial Williamsburg and other tourist locations, as well as mass mailings. This has dramatically affected visitation: in 2000, Jamestown Settlement hosted 512,613 visitors, while Jamestown Island hosted 378,960. Based on time constraints and poor planning (which is based on limited travel information), visitors choose to stop at only one of the Jamestown sites.

The existing visual environment is a vital resource of the Jamestown Project area and a major factor influencing the visitor experience during both the approach to Jamestown Island and on the Island itself. The visitor's first real experience of the site is through a confusing entrance area (often mistaken for the Jamestown Settlement), a roadway that ends in a parking lot, and limited signage. There is no orienting perspective for the visitor to understand how the settlement site would have been viewed by early inhabitants (i.e., the American Indians living in the area around the early 1600s), or for understanding the wealth of resources located in the Townsite and outer areas of Jamestown Island.

Jamestown Island is approached from two roadways: the Colonial Parkway or Jamestown Road (State Route 31) and State Route 359. The Colonial Parkway is a federal highway that links many important colonial, historical, and cultural resources together, including Williamsburg and the Yorktown Battlefield Unit of Colonial NHP. The approach to Jamestown Island on the Colonial Parkway passes by the entrance road (State Route 359) for the state-owned and operated Jamestown Settlement. The other approach to Jamestown Island is from Jamestown Road (Route 31), which is the primary transportation route between the City of Williamsburg to the north and Surry County to the south via the VDOT-operated Jamestown-Scotland Ferry. On the way to Jamestown, it traverses residential areas with limited signage. Visitors traveling along this route wonder where they are and when they will arrive at Jamestown. Road signage is not highly instructive so visitors, many of whom do not realize there are two Jamestowns, cannot identify the differences between the two sites. Instead of being adequately instructed to Jamestown Island, visitors will either go all the way to the ferry landing and wonder where they went wrong, or they will spot the Jamestown Settlement facilities and think they have reached the APVA/NPS Jamestown Visitor Center.

Approaching Jamestown Island from either the Colonial Parkway or Jamestown Road does not provide the visitor with a sequential or orientational experience. Transportation and access to this site are critical to the visitor experience since arrival in a vehicle loses the very sense of landscape that the colonists and the American Indians experienced in Jamestown. Even though the Colonial Parkway was designed as a vehicular experience, it does not provide adequate orientation or interpretation.

Finally, once visitors reach Jamestown Island, they are further disoriented by the fact that they arrive in a parking lot and not at the Visitor Center: parking is provided approximately 600 feet from the Visitor Center–800 feet for those that park at the back of the

lot. Visitors are finally oriented and introduced to Jamestown once in the middle of the core historic site, and they are not given the opportunity to place Jamestown in its physical or historical landscape.

1.6.1.2 Visitor Understanding

Visitor experience is also directly related to an understanding of the site. Since there is no direct orientation facility or location prior to arriving on the Townsite, visitors are not clearly directed as to how they should best view the site so they wander aimlessly to unconnected areas of interest. In addition, once on the site, the visitor does not understand the Townsite landscape and that a bustling town used to exist where now there is nothing but brick outlines, trees, and fences.

The current Townsite landscape is a result of incremental changes over 400 hundred years and does not resemble the colonial scene, nor does it portray that Jamestown was once a bustling tobacco farm and the colonial capital. Jamestown Island presents a potentially bewildering series of overlapping periods of human occupation. Buildings and other evidence of human use span different phases on the same locations. These factors together contribute to the limited understanding of the settlement's history and the reasons that colonists chose Jamestown Island.

As currently told, the Jamestown interpretive experience is focused on British colonial settlement. This displays a lack of sensitivity to all the peoples that together forged the history of this nation. A more inclusive account reflecting the unique perspectives of the other Europeans, Africans, and American Indians is needed to explain the rich and diverse telling of the cultures that contributed to the Jamestown story.

Furthermore, there is no opportunity to view the site from afar, like early American Indians would have when the settlers landed in the area. A perception of Jamestown as an island surrounded by open water and marsh is lost because no opportunities for long views are currently available.

The Jamestown Project will assist in unraveling the historic significance of each period represented on the Island through planned interpretive experiences. The focus of the time will be 1607 to 1699, the time period when Jamestown was the colonial port and capital. This however will be complemented with exhibits on the pre-colonial American Indian period, as well as 18th and 19th century development and commemoration of the settlement at Jamestown.

1.6.1.3 Site Interpretation and Exhibits

Although the APVA and the National Park Service have extensive artifact collections, the current exhibit layouts and locations limit visitors' experience of these resources. Many elements of the visitor experience have not changed in 50 years, no doubt resulting in low levels of interest. The APVA exhibits are fairly recent and focus on the Jamestown Rediscovery™ project, however the NPS museum displays are outdated (from 1957 and 1976), and the artifacts are often presented in a dark space as objects without historical context. The exhibits miss a golden opportunity to show the objects in relation to their place of their use and discovery.

The present NPS interpretive media has been updated since the 1970s but does not fully reflect current scholarship and recent research. The tools and methods for displaying the Island's resources do not take advantage of recent technological and scientific advancements. None of the exhibits are interactive, and none of them use virtual reality techniques. In addition, these displays have little or no connection to real people. Visitors, especially those with children, have come to expect unusual and engaging experiences when visiting historic and other national attractions and museums.

Improvements to site interpretation are also necessary to improve the visitor experience. Theatre 1, which shows a recently updated interpretive video funded by James City County, needs remodeling. Interpretive signage along the Loop Drive is outdated (1950s), and audio stations within the Townsite landscape are inaccurate, outdated,

and functionally deficient. These needs are exacerbated by the fact that the interpretive brochure that guides visitors around the site does not delineate a particular path or order for the tour, in part because there is not a cohesive interpretation of the site. Since visitors are left without clear options, they wander aimlessly about the site. Throughout the year and particularly during levels of peak visitation, visitors are not effectively distributed across the site. Visitors tend to focus their activities around the Visitor Center. The Island is rich in resources, but does not use or show them off to their best advantage. To better distribute visitor movements across the Island, focal points or features need to be established to draw interest to varied locations.

In addition, visitors are not actively engaged in the site and the exciting process of discovery. In particular, visitors on the weekends usually do not get to see archaeologists at work and thus miss the most interactive and sometimes more exciting portion of the current Jamestown Island visit. The archaeological resources at the site, both excavated and yet to be discovered, provide a vital link to the colonial settlement period. As additional finds are examined, the historical understanding of the time will grow, enticing visitors to return to Jamestown Island to view recent discoveries and new interpretations of the past.

The site of the 1607 James Fort, located on the banks of the James River and originally thought to be lost to erosion, is currently under excavation which is revealing extraordinary finds. If visitors are not aware of this resource, they will not venture to examine this active and important archaeological site.

The Visitor Center located more than 600 feet from the parking lot visually intrudes upon and dominates the town's historic landscape and the 1607 James Fort site, and detracts from visitor understanding of the Townsite in the context of the whole Island. The historical significance of early

settlement buildings, fortifications, and other sites under excavation is not well presented to the visitor. In addition, brick ruins and buildings from various time periods within the landscape are often confusing and misleading. The Ambler House ruins and other buildings are deteriorating and need further stabilization.

East of the Visitor Center parking lot a 5-mile long Loop Drive provides access to the Island. Both pedestrians and bicyclists share the road with vehicles. The Loop Drive on Jamestown Island needs updated interpretation to provide more interesting and educational opportunities for the visitor and modal diversity.

At present, the number of NPS personnel assigned to Jamestown is incapable of providing adequate visitor service, attention, and interpretation. Most noticeably, the experience of seeing the Townsite with a first person interpreter is limited. Because of this, most visitors cannot experience what is different and special about the Jamestown story at the original site of settlement. The current NPS staff are very resourceful and hardworking, but at current staffing levels it is not possible to cover the entire Island site nor do justice to the collections and their interpretation. Provision of engaging and memorable visitor experiences is often a function of the staff interaction level and their ability to spend time with visitors.

1.6.1.4 Facilities and Comfort

The 1956 Visitor Center—which is crowded, spatially mismanaged, and dark and dank in display areas—requires several infrastructure improvements. The structure is situated too far (600 feet+) from the parking lot, resulting in visitor confusion and poor orientation. Within the building, Theatre 2 lacks ventilation, windows, and adequate acoustic properties. It also serves multiple and incompatible functions, a fact that restricts adequate educational programming. The current space given to staff is inadequate: six staff members (including permanent and temporary) must share one 336-square foot

office. Also, archival storage space has reached capacity. In addition as discussed above, the Visitor Center is located within the historic Townsite, which is an intrusion on the 1607 James Fort site. The lack of a state-of-the-art Visitor Center means that visitors can observe only a very small percentage of the current collections: it only has sufficient display space to show less than 1% of the over 1,000,000-piece collection of artifacts and other items.

Comfort facilities represent a critical need in the context of the visitor experience. Limited food and beverage services influence the length of visitor stays, and often restrict exploration to those areas closest to the Visitor Center. The lack of shade and seating discourages visitors from completely exploring the Island during the summer months, and the number and location of restroom facilities also limits activities to the areas around the Visitor Center. Neither the Visitor Center nor areas in the Fort or Townsite are fully ADA accessible.

Current restroom facilities near the parking lot are not winterized and sometimes closed due to inadequate staffing; the only other public facilities on the Island are within the Visitor Center. The restrooms do not function without electricity, and electrical supply on the Island is inadequate and prone to surges and outages.

1.6.1.5 Transportation Options

The need for alternative transportation options has been a goal at Jamestown for quite some time. Visitors are unable to fully explore Jamestown by foot, bicycle, or even boat. The *General Management Plan for Colonial NHP* (1993b), the Outdoor Recreation Plan prepared by the Virginia Department of Conservation and Recreation (2000), a recent visitor survey (University of Idaho 2001a and 2001b), and public comment during scoping (Appendix C) have all shown a desire for multimodal options. The GMP proposes hike/bike trails separate from the Parkway itself, and the state has also identified shortages of hiking/walking and bicycling opportunities within Virginia. Providing

multimodal options would allow for an expanded interpretive experience and greater appreciation of the site.

Presently, the major mode of access to the Island is by personal vehicle. Even though the drive along the Parkway is majestic and serene, there is no sense of what difficulties the first settlers and early inhabitants had in living with the elements. Based on the site's topography, it was originally accessed via water or by foot when conditions permitted. Provision of these access modes would add to the visitor's appreciation of the site's development context and historical importance.

However, conflicts exist between vehicular and bike/pedestrian use of the Colonial Parkway: pedestrians and bicyclists do not have separate trails for access. Accessing the site via bicycle is also discouraged, because security facilities are lacking. Additionally, there are no pedestrian or bicycle connections between Jamestown Settlement and Jamestown Island.

Visitors also do not have a sense of the importance of the relationship of the Island to the Chesapeake Bay, the body of water through which the Europeans and Africans sailed before landing at Jamestown. Understanding the important role of the waterway through accessing the Island via boat—as an interpretive tour or mere transportation—presents a great opportunity for enhancing the visitor experience in the context of the settlement of this country.

Mass transportation would also allow for new interpretive experiences and help alleviate visitor confusion between Jamestown Settlement and Jamestown Island. Currently, mass transportation to Jamestown Island is limited to charter or school buses. Once on site, visitors using this form of transportation do not have the option of traveling along the Loop Drive, because buses are prohibited. In addition, if their charter or school bus does not stop at the Glasshouse or Jamestown Settlement, these visitors must walk on the Colonial Parkway.

Both the APVA and NPS have world-class sites and collections of interest to the visiting public. In order to adequately present such a site of national and international significance and actively engage the visitor, the following objectives must be met:

- Provide a seamless visitor experience between the APVA and NPS properties, and potentially with Jamestown Settlement.
- Attract and educate a wider, more diverse audience to the site by telling compelling stories of settlers of all nationalities.
- Improve visitor understanding of the history and significance of Jamestown as the site of the beginning of United States government, economy, society, and culture.
- Provide an initial point of orientation so visitors have a clear sense of where they should begin their visit. If appropriately placed, this orientation facility should also alleviate visitor confusion, before and upon arrival, between Jamestown Island and Jamestown Settlement.
- Provide the visitor with elevated views of the historic site to gain a sense of the island nature of Jamestown and the landscape that greeted the colonial settlers.
- Provide an integrated, high quality visitor experience through use of multimedia presentations and interactive, varied exhibits.
- Maximize the visual and historical integrity of the visitor experience by continually updating exhibits based on current research.
- Improve comfort facilities and provide food and beverage services, shade, and seating in more obvious and appropriate locations.

- Locate the Visitor Center in a more appropriate location and provide adequate space for interactive exhibits, visitor services, education needs, and staff.
- Provide for appropriate recreational use at the site (i.e. safe hike/bike trails, bird-watching opportunities, etc).
- Effectively distribute visitors across the site during levels of peak visitation.
- Increase staff to meet visitor needs.
- Provide transportation links within the historical triangle (Jamestown, Colonial Williamsburg, Yorktown) and to Green Spring.
- Provide multimodal access (shuttle/waterborne/bicycle/pedestrian) to and within Jamestown Island.
- Improve visitor flow, transportation to and within the site, and site access.

1.6.2 Protect the Jamestown Collection and Archival Materials

Because of their importance to United States history, researchers, and the public, existing and yet to be discovered resources need to be both protected and understood. The NPS portion of the Jamestown collection and archival materials is currently at risk for damage or loss because of its location in the basement of the 1956 Visitor Center. Given the significance of Jamestown, the need to protect these precious resources is historically, emotionally, and monetarily critical.

The total Jamestown museum collection, owned by both the APVA and the NPS, currently contains more than 1.1 million objects, including both prehistoric remnants and historic assemblages from

the 17th through 20th centuries. The APVA and NPS collections are stored in separate facilities, as described below.

The APVA portion of the Jamestown collection includes approximately 375,000 items and is housed in the recently expanded and renovated Jamestown Rediscovery™ Center (formerly the Yeardley House). The facility has up-to-date security, climate controls, and fire-resistant materials; however, there is no fire suppression system at this time due to the fact that the APVA is not connected to public water. Plans are in place to connect, but the APVA is waiting for the Jamestown Project preferred alternative.

Artifacts include materials from early excavations of the Jamestown church and statehouse foundations, as well as others from NPS excavations on APVA land in 1941 and the 1950s. In addition, the APVA's ongoing Jamestown Rediscovery™ archaeological project, begun in 1994, adds at least 50,000 artifacts per year to the collection. Of particular importance is the large assemblage of military objects that contains some of the only known examples of arms and armor with provenience¹. The artifact collection's uniqueness, its derivation from tightly dateable contexts relating to the first years of the colony's settlement, and its association with a large body of primary documents make it one of the most significant in the world.

The NPS Jamestown museum collection consists of approximately 650,000 items, primarily archaeological objects and their documentation from 70 years of archaeological excavation at Jamestown Island, Glasshouse Point, Neck of Land, and from Governor William Berkeley's mansion site, Green Spring, about three miles away.

¹ Source or origin.

The collection is housed in the basement of the Visitor Center, with less than satisfactory display and storage conditions. There is considerable concern over the condition of the NPS collection, which does not meet NPS museum standards for storage and protection. Based on a self-assessment using the *Checklist for Preservation and Protection of Museum Collections* (NPS 2000e), the storage conditions meet only 70% of the standard criteria. Many of the remaining standards cannot be met by modifying the existing storage space. Presently, pipes and mechanical systems are located within the storage area as well as supplies and materials, which should be stored separately.

Flood protection is also a critical need: according to NPS guidelines, collections should be stored above the 500-year floodplain or structures must be designed accordingly. The basement area, which is within the 100-year flood zone, is prone to leakage and water damage, and although the museum storage has climate control, frequent power outages at Jamestown and imperfections in the existing system can increase humidity 80%, which exceeds the threshold for mold development. Also, neither the APVA nor the NPS have adequate emergency flood evacuation plans.

Storing the APVA and NPS portions of the Jamestown collection in the same facility would allow it to be better cared for and understood through constant collegial consultation and support.

To address the immediate collection and archival material needs, the following objectives should be met for both the Jamestown collection:

- Provide for adequate storage space safely above the 500-year flood zone in a self-sustaining facility able to withstand catastrophic weather.
- Meet or exceed the established curatorial standards for each organization, including climate control and fire suppression.

- Provide adequate security for the Jamestown collection.
- Protect and preserve the Jamestown collection by placing their storage, research, and display areas in a joint facility, thereby enhancing collaborative efforts and making sure that the established standards related to their preservation (i.e., American Association of Museum Standards) can be met.

1.6.3 Enhance Research and Education

Jamestown Island presents a unique chance for researchers and visitors to gain understanding of the very beginnings of this nation's historical and cultural experience. Many resources can be viewed and evaluated in situ (i.e., in the landscape and setting in which they are found). If collections are maintained at Jamestown, resources (ruins, fortifications, and artifacts) that are yet to be found could also be portrayed in the landscape of their discovery. With protection and interpretation, the knowledge of an important American icon will grow and enhance the American people's understanding of its origins and values.

By using archaeology, history, and scientific methodology, the APVA and NPS are continually uncovering the once hidden past of Jamestown Island and its surrounding areas. However, there is a drastic lack of recognition and a tremendous need to educate the public about why Jamestown is so important to American history. Most people, unfortunately, do not know that Jamestown is the first permanent English colony in the Northern Hemisphere. Instead, they hear and learn, from various misinformed sources, that Plymouth Colony was the first English colony. For example, the popular "Schoolhouse Rock" educational songs never mention Jamestown in their song "No More Kings," which discusses the founding of America. Additionally, the story of Plymouth Colony is told

to millions of national and international visitors at Disney's Epcot Center, furthering the undervalued status of Jamestown.

Jamestown Island excavations were the birthplace of modern historical archaeology in the United States. The science of archeology was developed while exploring the resources of the Island and its environs. The ongoing archaeological activities are a living achievement that should be viewed by the public. Both the APVA's ongoing Jamestown Rediscovery™ project and the NPS Jamestown Archeological Assessment have made many crucial discoveries that are dramatically changing the way historians view the first settlers. The site does not fully capitalize on the intense interest of visitors in the recent and ongoing archaeological work, process, and discoveries. Active sites are evolving exhibits that not only engage the visitor, but also enhance research and education with each new find or discovery.

The total Jamestown collection, owned by both the APVA and NPS and housed in separate facilities, currently contains more than 1.1 million objects, including both prehistoric remnants and historic assemblages from the 17th through 20th centuries. The artifact collection's uniqueness, its derivation from tightly dateable contexts relating to the first years of the colony's settlement, and its association with a large body of primary documents make it one of the most significant in the world.

Due to the separation of the research and storage facilities of the APVA and the NPS, as well as the limited area, there is a huge loss of research opportunity. The separation prevents researchers from immersing themselves in the 17th century, and the inadequate size limits research by outside scholars and institutions. It is unknown if reconstitution of various artifacts or conclusions regarding different finds have been compromised due to the lack of facilities to allow for collaborative research and investigations of these precious resources. Additionally, numerous objects in the collection are without any context beyond "Found

on APVA Property." Improving on the collaborative research efforts of the APVA and NPS will more easily place these objects in context.

By bringing the APVA and NPS Jamestown collections together in one state-of-the-art facility (managed and maintained separately by each organization within that facility), cooperative research and the sharing of knowledge between the APVA and NPS will be enhanced and improved. In addition, by using one facility for research, there will be less duplication of space, i.e., one conservation lab, one research area.

Because of the inadequate facilities and lack of interactive venues both on- and off-site, the general public (visitors and non-visitors) does not understand the significance of Jamestown; its unique assets and special status are not properly recognized and understood by the public. By improving on-site exhibits and web access, Jamestown could become a place for premier education and research for the American public and beyond. The public could understand the legislative source of the dawn of our government, the role of women in American Indian life, the significance of the slave trade in the early colony, and personal family histories.

The following objectives related to research and education have been developed:

- Improve and increase educational programming through on-site and web-based facilities.
- Increase national and international awareness among non-visitors and potential visitors of the significance of Jamestown.
- Expand research facilities to provide access and allow for study and collaborative examination of the Jamestown collection as well as APVA and NPS resources.

- Locate the APVA and NPS portions of the Jamestown collection together, while maintaining management control of the objects themselves with the respective organizations.
- Provide for state-of-the-art storage, curation, conservation, and exhibition of the collections of Jamestown's archaeological and museum artifacts, archival materials, and photographic materials, with space for expanded collections resulting from future excavations.
- Target primary school systems for educational opportunities nationwide and collaborate with the Virginia General Assembly.
- Provide opportunities for new research findings to be continuously incorporated into flexible interpretive exhibits and programs.
- Protect and preserve the cultural resources, including the cultural and historic landscape, by enhancing the public perception of Jamestown as a unique treasure.
- Protect and enhance archaeological resources, both unearthed and excavated, for future generations and visitors to Jamestown, and provide for their examination and display in their original context.
- Develop structures to protect and display ongoing archaeological digs.

Jamestown Island is a site of national and international significance, yet its important place in the history of America is hardly known or disseminated. The Jamestown Project has a critical

role to play in educating the American public about the birthplace of American society, government, and values.

Only by enhancing the research and educational opportunities offered by the Jamestown Project will the visitor experience continue to evolve and improve, and the resources, specifically the collections, offered the protection they deserve.

1.6.4 Strengthen the APVA/NPS Partnership

To achieve the purpose of jointly researching, protecting, and presenting to the public the resources at Jamestown, the APVA and NPS must continue to strengthen their partnership. A partnership that is "generational" in its planning, thinking, and actions is key to the long-term preservation and interpretation of Jamestown.

Founded in 1889, the APVA is the oldest statewide preservation organization in the nation. The need to save and protect Virginia's crumbling and disappearing landmarks, most importantly Jamestown Island, was the reason that citizens created the APVA. They acquired 22.5 acres of the Island in 1893. In 1934, the NPS acquired ownership and administration of the remaining 1,500-acre Island.

As mentioned earlier, the Jamestown collection has two owners and is housed in different locations on Jamestown Island. Both organizations are leading players in developing the science of historical preservation and archaeology, with complimentary approaches to the cataloging of artifacts and placing them in their historical context. In addition, each organization provides many educational opportunities for the public. However, in order for the spirit and legacy of Jamestown to be remembered and commemorated for generations to come, the partnership must be strengthened.

Researching, protecting, and presenting to the public our nation's historical and cultural resources is a national obligation. For this to be accomplished most successfully for generations to come, the combined strengths and efforts of the APVA and NPS are pivotal. Working together, the partnership can accomplish more than either could do alone. Collaborating and forming a true "generational" partnership involves seizing new opportunities, fostering continual growth and evolution, and raising the bar for excellence. By doing so, the partnership will have a synergistic effect: generating new ideas, unleashing creative energy, and increasing performance on the whole.

At Jamestown, it is crucial to provide a balanced, seamless visitor experience. Based on the visitor confusion with Jamestown Settlement, it is already known that separate Jamestown experiences do not work. In order to avoid the creation of a third Jamestown experience, the Island partners must focus on what they have done and can do together to fully research, protect, and present to the public the resources at Jamestown.

Additionally, other relationships contribute to the success of Jamestown. The Jamestown Settlement—the Jamestown-Yorktown Foundation's living history museum—and Colonial Williamsburg are major popular historical visitor attractions to the area. Strengthening relationships with local agencies and institutions will facilitate regional marketing, ticketing, and multimodal opportunities.

To improve and build on the APVA/NPS relationship, the partners need to collaborate on research and education, storing and displaying the Jamestown collection, joint marketing and transportation, as well as joint ticketing with other organizations. The following objectives would enhance the partnerships that impact Jamestown Island:

- Present combined visitor services, exhibits, and displays of the Jamestown collection in a joint facility.
- Combine collections storage facilities while maintaining separate management of the objects themselves.
- Provide a joint research facility (with the collections facility), which fosters collaborative research between the organizations.
- Provide a joint education center.
- Continue and strengthen the joint management of Jamestown by (1) continuing to share a single entrance fee, (2) cooperating to avoid program duplication, and (3) cooperating to improve promotion and marketing at Jamestown.
- Strengthen other partnerships (Colonial Williamsburg, Jamestown Settlement, universities, concessionaires, etc.) to encourage joint ticketing, improved marketing, multimodal opportunities, research, data gathering, and more efficient management of Jamestown

1.7 PLANNING ISSUES AND IMPACT TOPICS

Issues are defined as the effect of the alternatives on a physical, biological, social, or economic resource. The issues are directly related to the needs of Jamestown and were developed during scoping and planning. "Chapter 5: Consultation and Coordination" summarizes the scoping process and Appendix C provides an analysis of all public comments received to-date. Because the issues related to the Jamestown Project are vast, they have been organized into categories that will be maintained within "Chapter 3: Affected Environment" and "Chapter 4: Environmental

Consequences” of this Final DCP/EIS. The categories are: Partnerships, Resources and Environment, Research and Education, Visitor Experience, Operations, Buildings and Utilities, and Transportation and Site Access.

1.7.1 Issues Related to Partnerships

The current level of coordination and cooperation between the Island partners (APVA and NPS) has proven beneficial to visitors, resources, research, and education; however, strengthening the relationship with the Jamestown-Yorktown Foundation (Jamestown Settlement) would help to avoid duplication of programs and to alleviate visitor confusion concerning the two different and separate Jamestown experiences. All organizations must continue to strive for a fully coordinated, “One Jamestown” experience.

1.7.2 Issues Related to Resources and Environment

1.7.2.1 Cultural Resources

Jamestown Island is host to valuable cultural resources that require preservation and protection. Some of these resources are currently at risk of being lost, damaged, or destroyed from storm, wind, and wave events. All impacts must address Section 106 of the National Historic Preservation Act, as amended.

Archaeology

In addition to natural events, sensitive archaeological sites, both known and yet to be discovered, are at risk of damage from the proposed alternatives. Avoidance and protection of archaeological sites is a priority for the NPS. However, data recovery and locations of facilities may adversely impact these resources. In areas that are unavoidable, appropriate mitigation measures must be used.

Historic Structures and Cultural Landscapes

Implementation of any of the alternatives would contribute to a change within the existing cultural landscapes (including a documented but not evaluated Mission 66 landscape). Potential project impacts to the Colonial Parkway, which is listed on the National Register, would include safety modifications to accommodate facilities at Neck of Land and changes to the existing visitor parking lot, which is considered the terminus of the Parkway. Based on these modifications, adverse impacts would be unavoidable; however, various design techniques could help to mitigate the impacts.

Collections

Currently, the NPS portion of the Jamestown collection is at risk of damage or loss. The collections are stored in the basement of the 1956 Visitor Center, which does not meet NPS museum standards (only 70% of the standard criteria on the NPS *Checklist for Preservation and Protection of Museum Collections*). These standards state that collections should be located outside of the 500-year floodplain, pipes and mechanical systems should not be located within the storage area, and supplies and materials should be stored separately. The basement has recurrent drainage problems because of its designed location within the 100-year flood zone. Sandbags are currently placed along the outside walls to help keep rain waters out.

1.7.2.2 Water Quality and Chesapeake Bay Preservation Areas

Powhatan Creek, which is an ecologically sensitive watershed, empties directly into the project area. The Center for Watershed Protection has identified the main threat to this watershed as being increased development. Even though Jamestown is at the base of this watershed, it is important that the project does not further degrade water quality as it enters the James River. In addition, the Jamestown Project site is entirely designated as a Chesapeake Bay Preservation Area. Current water quality conditions within the Jamestown Project area are unknown, and very limited stormwater management exists

throughout the developed areas. Local, state, and federal guidelines on development within Chesapeake Bay Preservation Areas must be considered.

1.7.2.3 Floodplains

As noted above, most of Jamestown Island is located within the 100- and 500-year flood zones. Because of the nature of the floodplain at the Jamestown Project site, impacts to floodplains should be minimal. However, consideration must be given to facility and infrastructure design, human safety, and protection of collections and cultural resources.

1.7.2.4 Wetlands

Approximately half of the Jamestown Project area is covered by tidal and non-tidal wetlands. Avoidance of these areas is desired, but may not be possible. The functions and values provided by these systems should at least be maintained. Construction within these areas would require permits and possible compensatory mitigation.

1.7.2.5 Rare, Threatened, and Endangered Species/Wildlife Habitat/Vegetation

Jamestown Island and additional areas within and adjacent to Colonial NHP are host to several rare, threatened, and endangered species, including the bald eagle, sensitive joint-vetch, gaping panic grass, and the great egret. The proposed alternatives may impact species' habitat so consideration must be given to sensitive areas and species' locations.

1.7.2.6 Visual Quality

The existing visual environment is a vital resource of the Jamestown Project area and a major factor influencing the visitor experience during both the approach to Jamestown Island and on the Island itself. In addition, the portion of the James River adjacent to the site is designated as a state scenic river. Placement of new structures and/or parking lots should not have an adverse impact on the existing viewsheds.

1.7.2.7 Hazardous Materials

When they are present, hazardous materials are potentially a threat to human health and environmental contamination. Due to the ages of the buildings at Jamestown, the potential for lead, asbestos, and oil and other hazardous materials is relatively high. Depending on the proposed demolition or remodeling of these structures, costs and procedures of removal would vary. Also, several underground storage tanks potentially exist at the site. Once construction begins, additional subsurface testing would be necessary in these areas.

1.7.3 Issues Related to Research and Education

It has been strongly recommended by the general public, researchers, and members of the planning team that locating the APVA and NPS portions of the Jamestown collection together would provide easier access for visitors and researchers. Since the APVA has no intention of removing their collections from the Island (stated in a letter to the NPS dated March 9, 2001), a new structure would need to be constructed adjacent to the Jamestown Rediscovery™ Center. This new facility would be located in the 100-year flood zone; however, in order to meet NPS guidelines, it must be above the 500-year floodplain.

In addition, space for current educational programming is extremely limited: all activities must share one multipurpose room. The current Visitor Center does not have space for expansion. Demands for additional space are at conflict with allowable federal appropriations and funding.

Finally, ongoing archaeological digs are in need of protection from the elements as well as potential theft and/or damage. At the same time, in order to follow the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b) concept of "Discovery," visitors should have access to view ongoing digs.

1.7.4 Issues Related to Visitor Experience

Although the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b) examined the visitor experience, several issues have been brought up by the public and planning team members.

1.7.4.1 Perspectives

Many people are concerned about the perspectives used to tell the story of Jamestown. It is told primarily from the British male viewpoint, which represents a major lack of diversity. In addition, the present interpretation has been updated since the 1970s but does not fully reflect current scholarship and recent research. A more inclusive story reflecting the unique perspectives of the American Indians, Europeans, and Africans is needed to tell the rich and diverse story of the cultures that contributed to the Jamestown story.

1.7.4.2 Visitor Confusion

Many visitors to Jamestown are confused by the existence of two Jamestowns – Jamestown Island and Jamestown Settlement – upon arrival. It is unclear to visitors which site they planned to explore and what the difference is between the sites. Visitors might visit one site without even realizing that the other exists. Adequate signage, marketing, and coordination would help to solve this problem. This in turn, requires strengthening the APVA/NPS partnership, time, and money.

1.7.4.3 Visitor Amenities

Currently at Jamestown, visitor amenities are severely limited. Restrooms are only located near the parking lot and within the Visitor Center; food and drinks are sold within a temporary structure during part of the year; and shaded seating is inadequate. Thus, visitors may limit their time spent on the Island, and their site visit may be restricted to the area surrounding the Visitor Center. The addition of visitor amenities would require supporting infrastructure and facilities, which may potentially impact the surrounding natural and cultural resources. Additional staff may need to be

available to operate these facilities as well as provide for their maintenance.

1.7.5 Issues Related to Operations

Current staff size is inadequate on days of peak visitation, and increasing visitation would put a larger demand on the staff. The additional amenities and security needs associated with construction of new facilities, along with the added need for resource protection and monitoring would burden the staff even further.

1.7.6 Issues Related to Buildings and Utilities

1.7.6.1 Facilities

As noted within the needs section above, the 1956 Visitor Center is located within the 100-year flood zone, and drainage is a recurring problem. The facility is not large enough to accommodate current collections, much less future ones; exhibition space is limited; educational space/research space is completely inadequate; it is situated 200 yards from the parking area, which does not allow for an initial point of contact for visitors; and its location and size intrude on the cultural landscape of the Townsite, the 1607 James Fort site, and Structure 112 (an area thought to be the location of the first statehouse). The demand and need for more space, as well as relocation to a more suitable place, are at conflict with allowable federal appropriations and funding.

1.7.6.2 Municipal Services/Infrastructure

In addition, existing municipal services and infrastructure are inadequate to support current facilities and operations at Jamestown. Both the public and the planning team feel a strong need to provide additional restrooms and food services, as well as an updated, interpretive program that uses the latest technology. Accommodating these needs would put an increased demand on the municipal services and infrastructure at Jamestown, and improvements to these services would be costly. In addition, fiber optic service, which is currently not

available at Jamestown, could possibly be required. Placing new underground lines and upgrading old ones would require disturbances within the sensitive landscape at Jamestown.

1.7.7 Issues Related to Transportation and Site Access

1.7.7.1 Multimodal Transportation

Colonial NHP's *General Management Plan*, the Virginia Outdoor Plan, and public scoping have established the need for multimodal opportunities. However, the ongoing *Alternative Transportation System Study for Colonial NHP* will not be completed prior to public release of the Jamestown Project DCP/EIS. In order to define alternatives related to multimodal transportation, further data will be required.

In addition, construction of bicycle/pedestrian trails and transit stops could potentially impact natural and cultural resources. In particular, pedestrians and cyclists must walk or bike on the Colonial Parkway: no separate path exists so conflicts with vehicular traffic occur. In order to provide safe passage for pedestrians and cyclists, new trails need to be constructed either adjacent to the Colonial Parkway or in other areas.

1.7.7.2 Site Access

Issues surrounding access to the site are mainly the result of visitor confusion, which was addressed above. An additional problem exists at the Glasshouse area. The current design of the parking area cannot accommodate the large number of buses that visit this site. Improvements to parking are necessary but may impact cultural and natural resources. If lots are located at another facility off of the Colonial Parkway, then modifications would be required for safety reasons, which would also result in adverse effects to the Parkway and its associated landscape.

1.7.8 Issues Considered but Dismissed

Issues that were brought up during the planning and scoping process, but have been dropped from further analysis, are listed below:

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Mining Activity within National Park System Areas Act of 1976
- Public recreational lands
- Farms and farmlands (except for prime farmland soils, which are addressed under the "Topography and Soils" section in "Chapter 4: Environmental Consequences")
- Indian Trust Resources
- Executive Order 13007, Access and Use of Sacred Sites
- Native American Graves Protection and Repatriation Act
- Light Impacts on Wildlife and the Night Sky
- Special events of 2007

They were dismissed because they were irrelevant to Jamestown; because the alternatives would not affect the resource; or because the impact would be negligible or minimal. For a more complete discussion of why these resources were considered irrelevant, refer to "Chapter 3: Affected Environment" chapter of this DCP/EIS. Additionally, many issues that were brought up by stakeholders and the general public were related to interpretation at Jamestown and have either been dealt with by the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b) or will be during further refinement of this plan.

1.8 REGULATORY, MANAGEMENT, AND LEGISLATIVE CONSIDERATIONS

Based on discussions with NPS and APVA representatives and planning team members, completion of the Jamestown Project should not require any changes to existing legislation or management policies. However, in order to comply with federal, state, and local regulations, natural and cultural resource related permits and approvals are required. In addition, various building and construction permits and approvals would also be required. Table 1-1 provides a list of the actions that may require a permit, the permit/approval needed, and the issuing agency.

As noted in Table 1-1, consultation under Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act are required. These consultations will be completed prior to the signing of the Record of Decision.

Appendix B also contains a complete list of the federal and state regulations and guidelines related to this project, as well as the applicable NPS guidelines and director's orders (Table B-1).

Table 1-1: List of Required Permits and Approvals for Project Completion

Action Triggering Need for Permit	Permit/Approval Required	Issuing Agency
Activity adversely affecting habitat or population of threatened or endangered species	Formal consultation under Section 7 of the Endangered Species Act	U.S. Department of the Interior – Fish and Wildlife Service
Encroachment in, on, or over subaqueous bottoms	Subaqueous Bottoms Permit	Virginia Marine Resources Commission
Bridge construction over navigable waterways	Bridge Construction Permit	U.S. Coast Guard
Discharge of dredged or fill material into navigable waters and adjacent wetlands	Section 404 Permit	Norfolk District, U.S. Army Corps of Engineers
Encroachment into or over navigable waters and adjacent wetlands	Section 10 of Rivers and Harbors Act Permit	Norfolk District, U.S. Army Corps of Engineers
Construction altering greater than five acres	Virginia Pollutant Discharge Elimination System General Permit	Virginia Department of Environmental Quality – Water Division
Excavating, filling, dumping, discharge, flooding, impounding, draining, altering, or degrading state waters including wetlands	Water Protection Permit / 401 Water Quality Certification	Virginia Department of Environmental Quality – Water Division

Table 1-1: List of Required Permits and Approvals for Project Completion

Action Triggering Need for Permit	Permit/Approval Required	Issuing Agency
Activity in the intertidal zone from mean low water to mean high water or to a point 1 ½ times the mean tide range if a vegetated tidal wetland	James City County Local Wetland Permit	James City County Wetlands Board
Activity affecting cultural resources	Consultation under Section 106 of the National Historic Preservation Act / Preparation of New Programmatic Agreement	Virginia Department of Historic Resources and the Advisory Council on Historic Preservation
Installing a sewage system, modifying an existing well, or modifying an existing sewage system	Permit	Virginia Department of Health
Visual changes to Community Character Corridors	Plan review and approval	James City County Planning Department
Development or construction in Chesapeake Bay Resource Preservation Areas	Variance and plan review and approval	James City County Environmental Division and Division of Code Compliance / Chesapeake Bay Local Assistance Department
Demolition of building with lead-based paint	Sampling of construction debris for Toxicity Characteristic Leachate Procedure	EPA-RCRA (40 CFR, Part 261, Subpart C)
Disposal of lead-based paint containing > 5 mg/L of Toxicity Characteristic Leachate Procedure	Disposal of materials by certified hazardous waste hauler to haz-mat facility; Hazardous Waste Manifest	EPA-RCRA
Disturbance of friable asbestos-containing material	Removable by licensed asbestos abatement contractor; 10 day notification to EPA prior to work	EPA
Disturbance of friable asbestos-containing material	20 day notification prior to work	Virginia Department of Labor
Demolition of non-friable asbestos-containing material	Wet-demolition notification to landfill that waste contains non-friable asbestos-containing material	EPA National Emission Standards of Hazardous Air Pollutants
Underground storage tank removal	Virginia Department of Environmental Quality notification form and Tank Closure Report within 30 days of removal	Virginia Department of Environmental Quality

Table 1-1: List of Required Permits and Approvals for Project Completion

Action Triggering Need for Permit	Permit/Approval Required	Issuing Agency
Disposal of mercury light fixtures and thermostats	Obtain EPA ID #; hire haz-mat contractor to segregate, package, transport, and dispose of	EPA-RCRA
PCB-containing light ballasts	Obtain EPA ID #; hire haz-mat contractor to segregate, package, transport, and dispose	EPA Toxic Substance Control Act
Improvements to site over 2,500 square feet	Land Disturbing Permit / Erosion and Sediment Control Plan	James City County
Utility extensions from Neck-O-Land Road to Neck of Land facilities	Right-of-Way Permit	Virginia Department of Transportation
Building addition or renovation	Building Permit (and related specific permits–Plumbing, Mechanical, Electrical, etc.) and Inspection	James City County Codes Compliance
Commercial passenger vessel operations	Certificate of Inspection	U.S. Coast Guard
Collections building access, utilities, and BMP (best management practice) on APVA property	Easement for Facilities	APVA/NPS Agreement
Impacts to wetlands and/or floodplains by non-exempted actions	NPS Statement of Findings	National Park Service
Federal activities which are likely to affect any land or water use or natural resources of Virginia's designated coastal resources management area	Coastal Zone Consistency Determination	Virginia Coastal Resources Management Program (coordinated by Virginia Department of Environmental Quality)

2

Alternatives

- 2.1 Introduction
- 2.2 Proposed Action and Range of Reasonable Alternatives
- 2.3 Overview of Alternatives
- 2.4 Alternatives Considered but Rejected
- 2.5 Alternative A: No Action Alternative
- 2.6 Elements Common to the Action Alternatives
- 2.7 Alternative B: Preferred Alternative
- 2.8 Alternative C
- 2.9 Alternative D
- 2.10 Alternative E
- 2.11 Cost Analysis
- 2.12 Environmentally Preferred Alternative and Summary of Environmental Consequences



2 Alternatives

2.1 INTRODUCTION

The design concept alternatives presented in this section were developed through a collaborative process of interdisciplinary team workshops, public meetings, and agency consultation that included scoping and public meetings. The public, stakeholders, Jamestown Project planning team members, and Association for the Preservation of Virginia Antiquities (APVA) and National Park Service (NPS) staff have raised many issues and identified opportunities that have been considered in developing the alternatives. The stakeholders include environmental regulatory agencies and many community groups and individuals who have given invaluable input into the range of concept design alternatives for the Jamestown Project and helped define the challenges for planning in this historic, beautiful, and fragile environment. An overview of this process as well as summary findings are included in “Chapter 5: Consultation and Coordination” and Appendix C.

At present, the facilities as well as the experience of Jamestown are considered woefully inadequate. Many elements of the current visitor experience at Jamestown have not changed in 50 years. Considering the historical significance of Jamestown, it is quite alarming that the experience is described as “adequate” at best. Immediate remedial action is demanded if we want this site to be a fitting memorial to all the peoples who, through trial and tribulation, forged a new society at Jamestown. Most importantly, the site demands attention in order to preserve Jamestown for future generations.

Accordingly, five alternatives, including the No Action Alternative, have been developed for the

Jamestown Project. The levels of and approach to the proposed modifications vary among the alternatives, but in all action options, there are huge improvements to the visitor experience. The changes that are proposed at Jamestown either address long overdue needs or are attributed to the newly established goals and objectives for the project, as outlined in the previous chapter.

Changes are being proposed because the current facilities, interpretation, and visitor experience do not:

- Do justice to the status of the historical site as one of supreme national importance and world significance.
- Encourage understanding of this status among the visiting public.
- Adequately convey the importance of the continued guardianship and research of the site.
- Successfully interpret the complexities of a many-layered story to the public.
- Provide adequate opportunities to present new research to the public.
- Fully capitalize on the intense interest of visitors in the recent and ongoing archaeological work, process, and discoveries.
- Successfully encourage the visitor to explore the whole core historic site and outer Island.

- Present the immense wealth of both material cultural and natural resources to the public to the best possible degree within the constraints of resource protection.
- Adequately inspire, engage, or otherwise motivate the visitor to want to learn more.

2.2 PROPOSED ACTION AND RANGE OF REASONABLE ALTERNATIVES

Jamestown is a complex, multi-layered landscape that requires unique treatment and presentation to be fully understood. Tools with which to engage and stimulate, excite, fire imaginations, touch emotionally, and challenge visitors intellectually are essential to truly experience the site.

All proposed actions respond to a described need based on the condition of the existing facilities and interpretation at Jamestown, as well as goals for the future. The proposed action seeks to develop a conceptual plan and subsequent implementation that: provides outstanding visitor experiences; relieves visitor confusion at Jamestown; provides safe storage and display of irreplaceable artifacts; provides better access to collections for researchers; provides new interpretation from recent research; supports ongoing research (historical, archaeological, scientific) and education; and maintains and protects natural and cultural resources of the project area.

In developing a range of alternatives, dutiful consideration was given to protecting the resources that make Jamestown unique and significant. In addition, the project seeks to develop plans that enhance the visitor experience and educate and excite all visitors about the entire story of the first permanent English settlement in North America.

As presented in “Chapter 1: Introduction: Purpose & Need for Action,” project goals/objectives and

needs/issues as well as stakeholder input and evaluations of previous conceptual work have guided the alternative design process. Many previous APVA and NPS management documents and plans, including the *General Management Plan for Colonial NHP* (NPS 1993b), have helped to establish specific goals for Jamestown, which were critical in the development of a reasonable range of the concept design alternatives presented in this section. In addition, a number of visioning initiatives led to the formulation of the proposed actions. Visioning began in 1997 with the work of ICON Architecture, Inc. and their proposed *Jamestown Master Plan*. This work was evaluated and built upon through a planning charrette (June 1999) with nationally renowned scholars, designers, and architects, and through consultations with many people who generously shared their expertise. This charrette resulted in a vision document, the *Draft Master Plan for Jamestown* (APVA and Colonial NHP 1999). Although this document has no legal standing, it also aided in the development of alternatives for the Jamestown Project. In March 2001, the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b) presented an interpretive concept for guidance in development of design concept alternatives. This visioning process and the resulting documents provided a foundation and focus for the Jamestown Project.

In developing the design alternatives presented in this chapter, many ideas, themes, and concepts were considered. Although the protection of Jamestown’s cultural and natural resources was at the forefront of each design concept, other important ideas were critical to the alternatives. These design guidelines were based on the objectives of the Jamestown Project, as discussed in “Chapter 1: Introduction: Purpose & Need for Action.” They include:

- Visitors should understand the natural environment of the Island: the power of climate, the relationship to the water, hardships that the settlers faced, and the fragility of the setting.

- Facilities should be of reasonable scale and mass and sensitive to the Island setting.
 - Plans should recognize building size and location as critical because of the Island's fragile resources and viewsheds.
 - Large piers or overlooks should not be placed on the James River. They are dissonant to and competitive with the dramatic excavations of the real site.
 - Bicycle access to Jamestown Island and other recreational opportunities should be explored.
 - New and creative ways to travel to Jamestown, such as mass transit or by water taxi, should be encouraged.
 - The Neck of Land area can provide a unique opportunity as a portal to Jamestown; visitors would change their modes of travel here and assume a pace more in keeping with the Island experience.
 - Plans should recognize that clarity of access and movement is crucial to visitors, who need both assurances and choices. Vehicular access, circulation within Jamestown, and alternative modes of movement must be easily understood.
 - To provide balance to the site (away from the 1607 James Fort, Church, and 1907 monument), plans should include interpretive anchors at the east and west ends of the historic area. This would help to tell the whole story of Jamestown and more effectively distribute visitors across the site during peak levels of visitation.
 - More displays of the collections within or close to the historic area would improve the appreciation of the cultural resources of the Island by strengthening the interpretive link between the site and its archaeological evidence.
 - Top-level professional research (archival, historical, archaeological, environmental, scientific) must be used to support the missions of the APVA and NPS. Such research would strengthen the collective capacity of the APVA and NPS and allow interpretation to be based solidly on research that keeps up with the evolving questions that scholars and the public will be asking about the site. This would in turn strengthen the educational role that the APVA and NPS provide to schoolchildren and the public.
 - Interpretation of the stories of Jamestown should be a central determinant of the approach to site and venue design.
 - Plans should recognize that the "island nature" of the site is essential to the quality of the visitor experience.
- The range of design concept alternatives propose various scenarios for: transportation and parking facilities on both Neck of Land and Jamestown Island; collections storage, curation, and research facilities both on and off Jamestown Island; Visitor Center orientation facilities on Neck of Land and on Jamestown Island; and exhibit venues that engage the visitor with the entire landscape of the Island and distribute the visitor experience over the entire historic Townsite. All alternatives are reasonable and represent a range of physical expressions that attempt to best fulfill the project goals and objectives.

2.3 OVERVIEW OF ALTERNATIVES

Overall, the proposed action alternatives have been designed by using the guidelines above and applying the goals and objectives established in “Chapter 1: Introduction: Purpose & Need for Action.” Table 2-1 presents those goals and objectives and provides a summary look at how

each alternative, including Alternative A, the No Action Alternative, meets each one.

The following discussion presents a general summary of each of the proposed alternatives, including Alternative A, the No Action Alternative. Figures 2-1 through 2-5 provide overviews of each alternative.

Table 2-1: Objectives and Alternatives						
Project Goals	Project Objectives	Alternative				
		A	B	C	D	E
Improve the Quality of the Visitor Experience	Provide a seamless visitor experience between the APVA and NPS properties, and potentially with Jamestown Settlement.	—	√+	√	—	√
	Attract and educate a wider, more diverse audience to the site by telling compelling stories of settlers of all nationalities.	√	√+	√+	—	√+
	Improve visitor understanding of the history and significance of Jamestown as the site of the beginning of United States government, economy, society, and culture.	√	√+	√+	√	√+
	Provide an initial point of orientation so visitors have a clear sense of where they should begin their visit. If appropriately placed, this orientation facility should also alleviate visitor confusion, before and upon arrival, between Jamestown Island and Jamestown Settlement.	—	√+	√+	—	√+
	Provide the visitor with elevated views of the historic site to gain a sense of the island nature of Jamestown and the landscape that greeted the colonial settlers.	—	√+	√+	√+	√+
	Provide an integrated, high quality visitor experience, through use of multimedia presentations and interactive, varied exhibits.	—	√+	√+	√+	√+
	Maximize the visual and historical integrity of the visitor experience by continually updating exhibits based on current research.	—	√+	√+	√+	√+
	Improve comfort facilities and provide food and beverage services, shade, and seating in more obvious and appropriate locations.	—	√+	√+	—	√
	Locate the Visitor Center in a more appropriate location and provide adequate space for interactive exhibits, visitor services, education needs, and staff.	—	√+	√	—	√
	Provide for appropriate recreational use at the site (i.e. safe hike/bike trails, bird-watching opportunities, etc).	—	√+	√+	—	√+

Table 2-1: Objectives and Alternatives						
Project Goals	Project Objectives	Alternative				
		A	B	C	D	E
Improve the Quality of the Visitor Experience (cont.)	Effectively distribute visitors across the site during levels of peak visitation.	—	√+	√	—	√+
	Increase staff to meet visitor needs.	—	√	√	√	√
	Provide transportation links within the historical triangle (Jamestown, Colonial Williamsburg, Yorktown) and to Green Spring.	—	√	√	√	√
	Provide multimodal access (shuttle/waterborne/bicycle/pedestrian) to and within Jamestown Island.	—	√+	√+	—	√+
	Improve visitor flow, transportation to and within the site, and site access.	—	√+	√+	√	√+
Protect the Collections and Associated Archival Materials	Provide for adequate storage space safely above the 500-year flood zone in a self-sustaining facility able to withstand catastrophic weather.	—	√+	√+	√+	√+
	Meet or exceed the established curatorial standards for each organization, including climate control and fire suppression.	—	√+	√+	√+	√+
	Provide adequate security for the Jamestown collection.	—	√+	√+	√+	√
	Protect and preserve the Jamestown collection by placing their storage, research, and display areas in a joint facility, thereby enhancing collaborative efforts and making sure that the established standards related to their preservation (i.e., American Association of Museum Standards) can be met.	—	√+	—	—	—
Enhance Research and Educational Opportunities	Improve and increase educational programming through on-site and web-based facilities.	√	√+	√+	√+	√+
	Increase national and international awareness among non-visitors and potential visitors of the significance of Jamestown.	—	√+	√	√	√
	Expand research facilities to provide access and allow for study and collaborative examination of the Jamestown collection as well as APVA and NPS resources.	—	√+	—	—	—
	Locate the APVA and NPS portions of the Jamestown collection together, while maintaining management control of the objects themselves with the respective organizations.	—	√+	—	—	—

Table 2-1: Objectives and Alternatives						
Project Goals	Project Objectives	Alternative				
		A	B	C	D	E
Enhance Research and Educational Opportunities (cont.)	Provide for state-of-the-art storage, curation, conservation, and exhibition of the collections of Jamestown’s archaeological and museum artifacts, archival materials, and photographic materials, with space for expanded collections resulting from future excavations.	—	√+	√	√	—
	Target primary school systems for educational opportunities nationwide and collaborate with the Virginia General Assembly.	—	√+	√+	√+	√+
	Provide opportunities for new research findings to be continuously incorporated into flexible interpretive exhibits and programs.	—	√+	√+	√	√
	Protect and preserve the cultural resources, including the cultural and historic landscape, by enhancing the public perception of Jamestown as a unique treasure.	—	√+	√	—	√
	Protect and enhance archaeological resources, both unearthed and excavated, for future generations and visitors to Jamestown, and provide for their examination and display in their original context.	—	√+	—	√	√
	Develop structures to protect and display ongoing archaeological digs.	—	√	√	√	√
Strengthen the APVA and NPS Partnership	Present combined visitor services, exhibits, and displays of the Jamestown collection in a joint facility.	—	√+	√+	√+	√+
	Combine collections storage facilities while maintaining separate management of the objects themselves.	—	√+	—	—	—
	Provide a joint research facility (with the collections facility), which fosters collaborative research between the organizations.	—	√+	—	—	—
	Provide a joint education center.	—	√+	√+	√+	√+
	Continue and strengthen the joint management of Jamestown by (1) continuing to share a single entrance fee, (2) cooperating to avoid program duplication, and (3) cooperating to improve promotion and marketing at Jamestown.	√	√	√	√	√
	Strengthen other partnerships (Colonial Williamsburg, Jamestown Settlement, universities, concessionaires, etc.) to encourage joint ticketing, improved marketing, multimodal opportunities, research, data gathering, and more efficient management of Jamestown.	—	√+	√	√	—

Notes: — NEEDS WORK
 √ SATISFACTORY
 √+ EXCELLENT

2.3.1 Alternative A: No Action Alternative

Alternative A, the No Action Alternative (Figure 2-1), would assume continuing current management practices at Jamestown Island and the Glasshouse without any substantive changes in facilities, infrastructure, or resource investment.

This concept, required by federal regulations, will be used as the baseline for comparing the impacts of the other alternative concepts. In Alternative A, current buildings would remain with future programming, research, archaeological investigation, cultural landscape investigation, and maintenance operations as planned for both the APVA and the NPS and their joint management goals. Alternative A would allow for any necessary changes to management and/or operations of the existing facilities over time.

The No Action Alternative would continue the current level of visitor experience at Jamestown, and the current facilities and interpretation would remain inadequate.

2.3.2 Alternative B: Preferred Alternative

Figure 2-2 provides an overview of Alternative B, the Preferred Alternative. Alternative B would maximize the interpretive use of the resource. It is also the only alternative to effectively address the current inadequate visitor experience in Alternative A and fully realize the *Jamestown Island Interpretive Plan* (Haley Sharpe Design 2001b). The key proposed visitor facility structures are summarized below; each would perform very specific and individual tasks. Together they would create an exciting and diverse discovery experience of quality and vision, appropriate to the status of the site and its significance.

Intermodal Transportation Facility at Neck of Land: This facility would orient visitors to Jamestown Settlement, Jamestown Island, and other historic site opportunities and relationships in the

immediate context of Jamestown. It would also offer the immense opportunity to provide contextual introductory interpretation along those routes. This interpretation would include the Island setting, prehistoric context, and natural environment. Further, this facility would serve as an essential node to allow transfer to alternative transportation routes to the Island. Visitors could choose alternate means of transport to the Island – by foot, bicycle, boat, or shuttle. An extensive pedestrian/bicycle path would be aligned on the pre-1957 road trace before entering the Neck of Land marsh where it becomes a boardwalk, connecting to Jamestown Island by a pedestrian bridge over Back River.

Replacement Visitor Center/Educational Facility in the Island Parking Lot: This facility would serve as the point of arrival to Jamestown Island and would provide a sense of welcome for visitors. It would offer visitor support facilities, such as café, retail, and toilets, and an orientation to the Island and the core historic site. The major themes of the Jamestown storyline would be introduced and some collections would be displayed within temporary exhibition space. Dedicated educational and programming space would also be housed in this facility.

Observation Building: The Observation Building would provide a unique interpretive experience, linking site views to artifacts and storylines. The building would contain significant collections display space and would reuse the existing Visitor Center, though greatly reduced in size (from 30,000 square feet to 5,000 square feet). The facility would provide the best point from which to view the Townsite in all directions and would allow visitors to prepare for an exploration of the site or to reinforce what they have already seen on the site. The building's design and displays would help to distribute visitors across the site, encouraging the experience of and use of the Island landscape. Finally, on a simple practical level, the Observation Building would provide relief from summer heat and flies, or winter rain and cold and restrooms as visitors cross and recross the extensive site.

APVA and NPS Collections and Research Center:

This facility would provide a world-class research and collections storage and conservation facility and would offer easy access to joint collections and archives. Most importantly, it would allow for placement of the Jamestown collection in one facility. This would also remove the NPS collection out of its current location in the basement of the existing 1956 Visitor Center and out of the threat of flood.

Intermodal Transportation: In Alternative B, the interpretive benefits of the modal transfers would be fully explored. Only in this alternative would the hike/bicycle route take visitors through the marsh areas north of the Island and directly onto the Island via a bridge (which has a historical precedent). This means of non-water access to the Island would be the only one to fully grasp the interpretive opportunities of the site and allow them to be successfully achieved.

Exhibit Venues: In Alternative B, as well as the other action alternatives, new exhibit venues would be designed for the east and west ends of the historic Townsite. The eastern anchor would include the Agricultural exhibit area focusing on agricultural aspects of Jamestown's history and potentially including some experimental archaeology. The western anchor, the Ludwell exhibit facility, would also include experimental archaeology along with exhibits related to the Ludwell Statehouse Group and the trials and tribulations faced by the colonists.

2.3.3 Alternative C

In Alternative C (Figure 2-3), the division of functions is similar to Alternative B, with the major exception that the main facility on Neck of Land would house NPS collections in addition to visitor functions. Consequently, the proposed facility at Neck of Land is much larger in Alternative C than in Alternative B. Alternative C also proposes the Observation Building and Island exhibit venues as they were described above under Alternative B.

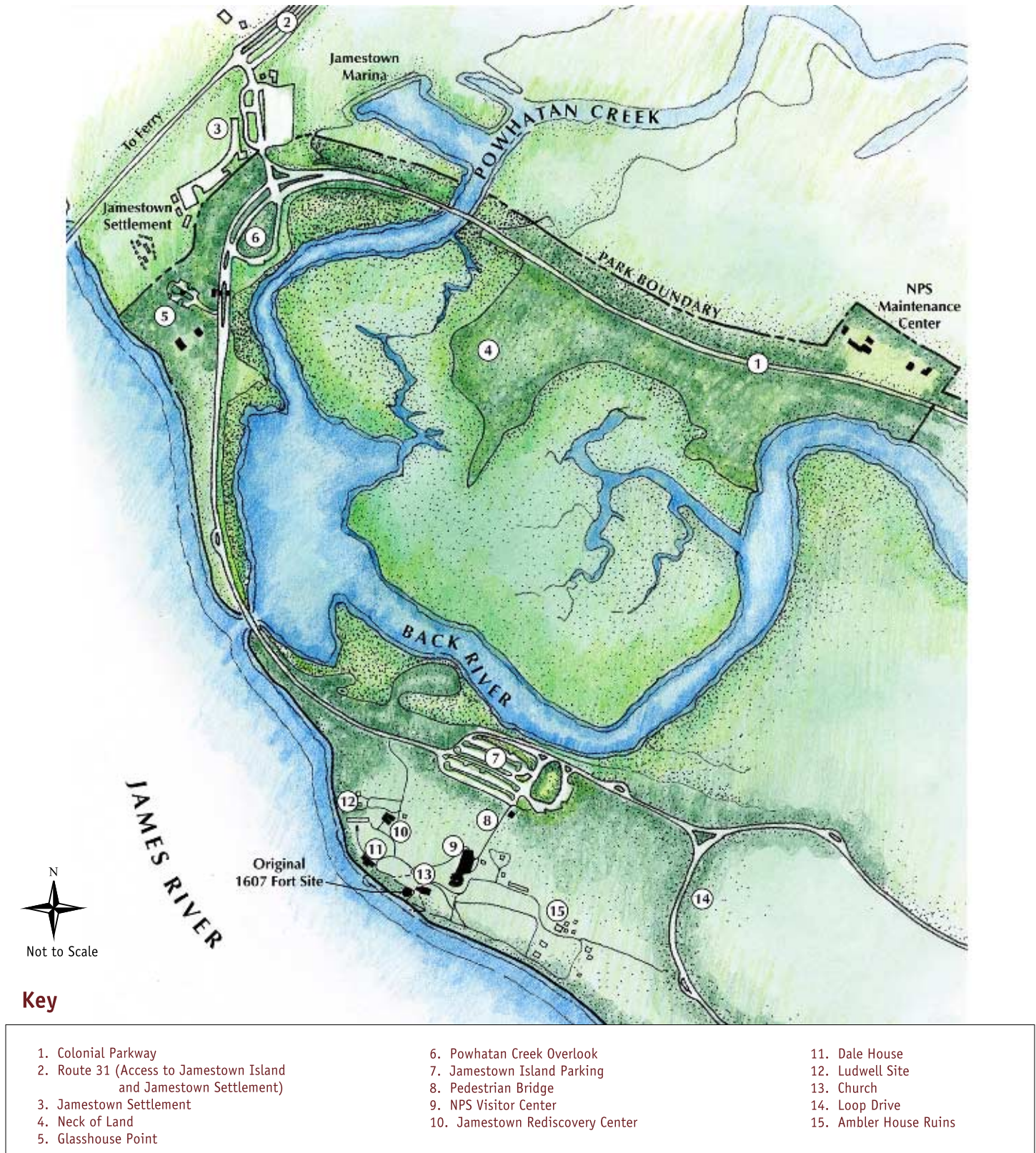
Intermodal Transportation Terminal/Visitor

Center/Educational Facility/NPS Collections and

Research Facility: This one, large facility would house all of the functions of the Intermodal Transportation Terminal, Visitor Center, and NPS collections storage and research. By having the main facilities on Neck of Land, the majority of vehicular traffic would be removed from the Island. The location of the major facility in Alternative C would be remote from the Island; therefore its interpretive and practical use for site introduction and as a programming base would be weakened.

In addition, this facility, as proposed under Alternative C, would split the Jamestown collection by housing the NPS collections at Neck of Land and keeping the APVA collections at the Jamestown Rediscovery™ Center on the Island. This would not foster collaborative research and study between the two organizations and would split what is essentially one collection - the Jamestown collection. Also, this alternative would not provide for the examination and display of artifacts in their original context because NPS research facilities would be remote from the Townsite.

Intermodal Transportation: From Neck of Land, alternative transportation options would be available to reach the Island and Glasshouse areas. These options would include shuttle, water transport, and pedestrian/bicycle opportunities on the existing Colonial Parkway pavement. There would be no separate hike/bicycle paths in this alternative, except the path from the Glasshouse to Jamestown Settlement that is common to all of the alternatives. The hike/bicycle path in Alternative C would follow a route along the existing Parkway, out of the natural environment and in close proximity to road traffic, neither of which would be helpful in terms of building interpretive atmosphere, nor in terms of providing points at which waysides and overlooks of the marsh and northern shore of the Island could be constructed.



Legend

Existing

Figure 2-1: Alternative A - No Action



Legend

- Existing
- Proposed

Figure 2-2: Alternative B - Preferred Alternative



Legend



Figure 2-3: Alternative C

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2.3.4 Alternative D

Alternative D (Figure 2-4) proposes a reconfigured Visitor Center/educational facility/NPS collections/Observation Building on Jamestown Island, and leaves Neck of Land as it currently exists, thus maximizing previously disturbed areas and minimizing new disturbance. However, all the opportunities for interpretation and approach to the Island, as described in Alternative B, would be missed. This would significantly weaken the visitor experience. It would also seriously hinder visitor understanding of the physical context of the Island and its early history, especially in relation to local tribal presence and perspectives.

Alternative D would, however, provide new interpretive opportunities at the proposed exhibit venues on the Island, as described under Alternative B.

Visitor Center/Educational Facility/NPS Collections/Observation Building: This facility would be one large, multi-storied structure on the site of the existing 1956 Visitor Center and would house the NPS collections (moved out of the basement). The building would also include the Visitor Center/educational facility and the functions of the Observation Building. Initial orientation, interpretive introduction, most of the interpretive exhibits, temporary exhibition, most of the collections display, the concept of the Observation Building, educational and programming facilities, offices, and visitor facilities would be housed within this one building.

In Alternative D, the Jamestown collection would remain on the Island. However, the NPS portion would not be colocated with the APVA portion. In order to move the NPS portion of the Jamestown collection above the 500-year floodplain, the existing 1956 Visitor Center would require an additional story. This facility would have to accommodate collections, research, and curatorial space. As the current Visitor Center sits within the core historic

site and is already a visual intrusion, its increased size would cause it to have a greater visual impact than the existing Visitor Center.

Intermodal Transportation: The existing Island parking would remain, with no changes to Neck of Land, and there would be no pedestrian/bicycle or boat access beyond what is currently available. The existing Colonial Parkway would remain accessible to pedestrians and cyclists, and the Jamestown Explorer would be available for water tours with no Island access. The only separate hike/bicycle path would be from the Glasshouse to the Jamestown Settlement. Mass transit options would be available via the proposed Colonial Parkway shuttle or Colonial Williamsburg buses.

2.3.5 Alternative E

In Alternative E (Figure 2-5), the distribution of facility structures would be similar to Alternative B, with the significant exception that the NPS collections would be remotely housed in Williamsburg or James City County.

As described under Alternative B, Alternative E would include the Intermodal Transportation Facility at Neck of Land (with the difference of having a smaller parking lot), a replacement Visitor Center in the existing Island parking lot, the Observation Building (smaller than in Alternatives B and C), and exhibit venues on the Island.

Observation Building: As described under Alternative B, this facility would provide a unique interpretive experience, linking site views to artifacts and storylines. The facility location provides the best point from which to view the site in all directions, and it would provide a staging post as well as relief from summer heat and flies and winter rain and cold. However, the facility proposed under Alternative E would be half the size of the Observation Building proposed for Alternatives B and C (2,500 square feet versus 5,000 square feet),

thus functions would have to be scaled back and visitors may have to visit other site venues first if lines form at the Observation Building.

NPS Collections Facility Off Site: The NPS collections facility would be located away from Jamestown in the Williamsburg/James City County area. The building would have the same requirements for safety and protection of the collections as any other collections facility for the NPS. In addition, land would have to be purchased or leased for construction of the facility.

In Alternative E, the separation of the Jamestown collection – by moving the NPS artifacts to a more remote location and leaving the APVA collection on the Island at the Jamestown Rediscovery™ Center – would seriously weaken the research strength of the Island and would undermine the interpretive concept of “Discovery.” It would also greatly diminish collaborative research benefits and interpretive support and have practical concerns for staffing and operations.

Intermodal Transportation: Alternative modes of transportation to the Island would be available through water transport and a separate pedestrian/bicycle path to the Powhatan Creek Overlook. This alternative would include an extensive separate pedestrian/bicycle path winding across Neck of Land and connecting with the Powhatan Creek Overlook by a new bridge across Powhatan Creek. There would also be a boat route from Neck of Land to Jamestown Island. The hike/bike route in Alternative E would cross the Neck of Land marsh to the west, providing similar interpretive opportunities as in B. However, it would then rejoin the Parkway, effectively destroying at this point the unique and “special” sense of arrival provided by Alternative B, which would provide a direct link to the Island, without the proximity of vehicular traffic.

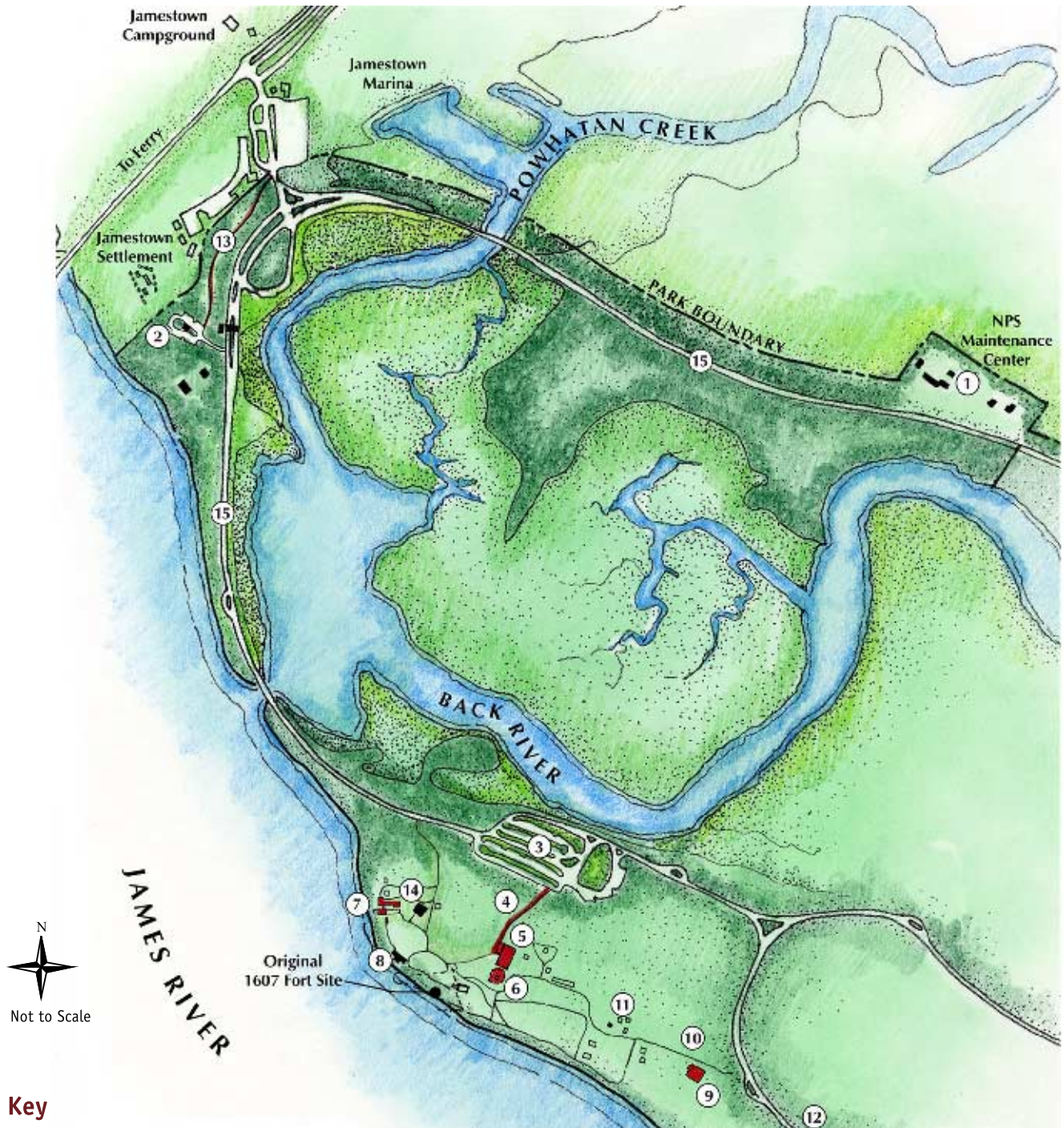
Table 2-2 provides a summary of proposed actions related to each of the action alternatives.

2.4 ALTERNATIVES CONSIDERED BUT REJECTED

In the process of developing the action alternatives for the Jamestown Project, ideas and plans were formulated, studied, and presented to the Jamestown Project planning team, stakeholders, and consultant agencies. Many factors influenced the proposed alternatives, including new findings of rare and endangered species, the draft *Jamestown Island Cultural Landscape Report* (OCULUS 2002), the designation of the Colonial Parkway on the National Register of Historic Places, the recognized scale and character of the Jamestown Project area, and goals for interpretation and the visitor experience. After careful consideration, consultation, and input from presentations and discussions, several alternatives were not considered viable and were therefore rejected for the project.

2.4.1 Revisiting the ICON Draft Master Plan for the Jamestown Project

Major elements of this plan included an Ancient Planters Plantation on Neck of Land and a new, expanded Visitor and Research Center in an area extending from the Jamestown Rediscovery™ Center to the southern edge of the existing Island parking lot (approximately 80,000 square feet of new construction). Also included was a unified interpretive landscape with ground surface treatments, three-dimensional elements and special effects, and a set of archaeological stations in the landscape to protect archaeology. Structures to accommodate these interpretive goals included a system of temporary, semi-permanent, and long life resource stations scattered over the historic area and a major landscape planting of “commemorative dogwoods” in a pattern across the historic landscape. There were also docks planned for the Island shoreline on the James River, just east of and immediately adjacent to the original Fort Site. A permanent observation deck, which extended over the water in the shape of a corner of the original Fort, was also proposed.



Legend



Figure 2-4: Alternative D



Legend



Figure 2-5: Alternative E

Table 2-2: Action Alternative Comparison				
Proposed Action	Alternative B	Alternative C	Alternative D	Alternative E
Facilities				
New Visitor Center / Educational Facility	New building in existing Island parking lot - 19,000 sf. Provides retail, restrooms, orientation to the site, educational space, offices, and interpretive overview of the entire site.	New building at Neck of Land. Also contains NPS research facility, collections, and Intermodal Transportation Terminal. Combined square footage – 28,000 sf.	Reconfigured existing Visitor Center (education/NPS research facility) with Observation Building and NPS collections. One large building; 3 stories; combined square footage – 32,000 sf.	New building in existing Island parking lot - 19,000 sf. Provides retail, restrooms, orientation to the site, educational space, offices, and interpretive overview of the entire site.
Intermodal Transportation Terminal	New facility provides destination/transport options, significant interpretation, and ticketing. Building would be seasonal, closed December through March – 2,000 sf.	In new Visitor Center. Open year-round.	Nothing at Neck of Land.	New facility provides destination/transport options and ticketing. Building would be seasonal, closed December through March – 2,000 sf.
Ticketing/Orientation on Island	In the new Visitor Center.	Ticketing facility and ranger interpretive offices in existing Island parking lot – 1,000 sf.	In reconfigured existing Visitor Center.	In the new Visitor Center.
NPS Collections Storage, Research and Education	With APVA collections and research in expanded Jamestown Rediscovery™ Center on Island - 8,000 sf.	On Neck of Land with Visitor Center and Intermodal Transportation Terminal. Facility houses education and NPS research, which is split from APVA' s – 8,000 sf.	In reconfigured existing Visitor Center. Facility houses education and NPS research on the Island. Splits research from APVA' s - 8,000 sf.	Located at a remote site in Williamsburg or James City County, which removes NPS research facility from Jamestown. Splits research from APVA 's – 8,000 sf.
APVA Collections/Research Facility	With NPS collections in expanded Jamestown Rediscovery™ Center on Island.	In existing Jamestown Rediscovery™ Center on Island.	In existing Jamestown Rediscovery™ Center on Island.	In existing Jamestown Rediscovery™ Center on Island.
Parking Lot at Jamestown Rediscovery™ Center	Reconfigure using pervious material.	Reconfigure using pervious material.	Reconfigure using pervious material.	Reconfigure using pervious material.
Observation Building	Modified existing Visitor Center with landscape overlook, exhibits, dressing room for interpreters - 5,000 sf.	Modified existing Visitor Center with landscape overlook, exhibits, dressing room for interpreters - 5,000 sf.	Combined with Visitor Center, NPS collections and research, and education at existing Visitor Center with landscape overlooks, exhibits, dressing room for interpreters - 5,000 sf.	Modified existing Visitor Center with landscape overlook - 2,500 sf.
Pedestrian Bridge to Observation Building via Pitch and Tar Swamp	Connects proposed Visitor Center to the Observation Building on the western side.	Connects proposed Island ticketing facility to the Observation Building on the western side.	Connects existing parking lot to west side of reconfigured existing Visitor Center/Observation Building/collection/education/NPS research facility.	Connects proposed Visitor Center to the Observation Building on the western side.
Ludwell Exhibit Facility	Anchor and key interpretive site at west end of historic site - 7,500 sf.	Anchor and key interpretive site at west end of historic site - 7,500 sf.	Anchor and key interpretive site at west end of historic site - 7,500 sf.	Anchor and key interpretive site at west end of historic site - 7,500 sf.
Restrooms	In Visitor Center, Observation Building, Dale House, Ludwell Facility, Intermodal Transportation Terminal at Neck of Land, and at Agricultural exhibit area (water/sewer connected).	Neck of Land Visitor Center, Observation Building, Dale House, Ludwell Facility, and Agricultural exhibit area (water/sewer connected).	Visitor Center, Ludwell Facility, and at Agricultural exhibit area (low impact).	Visitor Center, Observation Building, Ludwell Facility, Orientation Facility at Neck of Land, and at Agricultural exhibit area (low impact).
Shade/Seating	At all facilities, site venues, Dale House, walkways, and outer landscapes.	At all facilities, site venues, Dale House, walkways, and outer landscapes.	At all facilities, site venues, Dale House, walkways, and outer landscapes.	At all facilities, site venues, Dale House, walkways, and outer landscapes.
Retail	In new Visitor Center on Island, Ludwell exhibit facility, Dale House.	In new Visitor Center at Neck of Land.	In reconfigured existing Visitor Center on Island.	In new Visitor Center on Island.
Refreshments (Food and Drink)	In Intermodal Transportation Terminal at Neck of Land (vending), Visitor Center, Dale House, and at Agricultural exhibit site (drinks).	Visitor Center at Neck of Land, Dale House, and at Agricultural exhibit site (drinks).	In reconfigured existing Visitor Center and at Agricultural exhibit site (drinks).	Intermodal Transportation Terminal at Neck of Land (vending), Visitor Center, and Agricultural exhibit area (drinks).
Historic Structures and Sites				
Agricultural Exhibit Area	Key interpretive site for east end of the historic area.	Key interpretive site for east end of the historic area.	Key interpretive site for east end of the historic area.	Key interpretive site for east end of the historic area.
Ambler House Ruins	Interior support becomes observation platform.	Interior support becomes observation platform.	Interior support becomes observation platform.	Interior support becomes observation platform.
Dale House Renovation	Renovate interior for refreshments/food. Improvements to site circulation.	Renovate interior for refreshments/food.	No change: continues as exhibit/workspace for APVA.	Renovate interior for donor/volunteer lounge.
Modification to 1907 Monument Site	Remove 1976 pear trees and modify paving.	Remove 1976 pear trees and modify paving.	Remove 1976 pear trees and modify paving.	Remove 1976 pear trees and modify paving.
Mule Barn (APVA Restoration Shop) and Storage Shed	Mule Barn does not move; storage shed relocated.	Mule Barn does not move; storage shed relocated.	Mule Barn does not move; storage shed relocated.	Mule Barn does not move; storage shed relocated.

Table 2-2: Action Alternative Comparison (Cont'd.)				
Proposed Action	Alternative B	Alternative C	Alternative D	Alternative E
Transportation				
Parking at Neck of Land	Parking for 250 cars (phased:150, then 100) , 15 new buses.	Parking for 300 cars (phased: 200, then 100) , 20 new buses.	No parking at Neck of Land.	Parking for 100 cars (phased: 50, then 50) , 8 new buses.
Modification of Island Parking	Remove some parking to accommodate new Visitor Center and bus turnaround. Retain space for 100-150 cars and 25 bus and RV spaces .	Parking on Island for 50 cars and 20 bus and RV spaces .	Existing Island parking remains the same: 350 cars, 25 buses – no modifications to parking.	Remove some parking to accommodate new Visitor Center and bus turnaround. Retain space for 200 cars and 25 bus and RV spaces .
Boat Dock: Eastern side of Neck of Land	Provides visitor access by boat to Island and Powhatan Creek Overlook.	Provides visitor access by boat to Island and Powhatan Creek Overlook.	No boat dock.	Provides visitor access by boat to Island.
Boat Dock: Jamestown Island (on southern Back River)	Provides visitor access by boat to Powhatan Creek Overlook and Neck of Land.	Provides visitor access by boat to Powhatan Creek Overlook and Neck of Land.	No boat dock.	Provides visitor access by boat to Neck of Land.
Boat Dock: Powhatan Creek Overlook	Third stop for water transport (access to Jamestown Settlement).	Third stop for water transport (access to Jamestown Settlement).	No boat dock.	No boat dock.
Modal Transfer on Island	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.	Opportunity for visitor to change transport via shuttle or Colonial Williamsburg bus.	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.
Modal Transfer at Powhatan Creek Overlook	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.	No modal transfer at this location.	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, or hike/bicycle.
Modal Transfer at Neck of Land	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.	No modal transfer at this location.	Opportunity for visitor to change transport via shuttle, Colonial Williamsburg bus, boat, or hike/bicycle.
Modification of Glasshouse Parking	Parking for 31 cars and 12 buses; improve circulation.	Parking for 31 cars and 12 buses; improve circulation.	Parking for 31 cars and 12 buses; improve circulation.	Parking for 31 cars and 12 buses; improve circulation.
Gatehouses (Entrance Booths 1 and 2)	Gatehouses removed; replaced with electronic gate.	Gatehouses remain staffed.	Gatehouses remain staffed.	Gatehouses removed; replaced with electronic gate.
Access to Jamestown Island	Electronic security gate and signage.	Gatehouses remain staffed.	Gatehouses remain staffed.	Electronic security gate and signage.
Ranger Station (at existing gate)	Remains for future Glasshouse functions.	Remains for future Glasshouse functions and gatehouse support.	Remains for future Glasshouse functions and gatehouse support.	Remains for future Glasshouse functions.
Hike/Bicycle Transportation				
Hike/Bicycle Trail: Neck of Land	On old asphalt road trace and marsh boardwalk going south to the Island.	No trail at this location.	No trail at this location.	Trail to marsh boardwalk west across marsh and across Powhatan Creek to the Overlook.
Hike/Bicycle Bridge	Across Back River.	None.	None.	Across Powhatan Creek.
Hike/Bicycle Trail: Island to Settlement and Glasshouse	Hikers, cyclists use existing Parkway pavement.	Hikers, cyclists must use existing Parkway pavement.	Hikers, cyclists must use existing Parkway pavement.	Hikers, cyclists must use existing Parkway pavement.
On-grade Parkway Crossing at Glasshouse (for hike/bicycle trail)	No changes in pavement.	No changes in pavement.	No changes in pavement.	No changes In pavement.
Walkways from Boat Docks	At Island, Powhatan Creek Overlook, and Neck of Land boat docks.	At Island, Powhatan Creek Overlook, and Neck of Land boat docks.	No boat docks.	At Island and Neck of Land boat docks.
Walkways from Bridges	Path continues from hike/bicycle bridge over Back River.	No hike/bicycle bridges.	No hike/bicycle bridges.	Path continues from hike/bicycle bridge over Powhatan Creek.
Hike/Bicycle Path: Glasshouse to Settlement	Separate gated path: Glasshouse to Jamestown Settlement.	Separate gated path: Glasshouse to Jamestown Settlement.	Separate gated path: Glasshouse to Jamestown Settlement.	Separate gated path: Glasshouse to Jamestown Settlement.
Road Modifications				
Modification of Parkway: Neck of Land	Widen Parkway and add median.	Widen Parkway and add median.	No change.	Widen Parkway and add median.

Planning team members rejected these major elements for the following reasons:

- Neck of Land is a strategic location for entry to “One Jamestown,” and there would be no logic to the visitor experience or visitor movement with an Ancient Planters Plantation located here.
- The size and scale of the proposed Visitor/Research Center (80,000 square feet) would overshadow the Island setting and character. The proposed construction compromised essential qualities of the Island and important archaeological sites.
- Visitor use in fragile areas should be managed to protect important resources and ecosystems. The proposed plan was not sensitive to the natural resources, cultural resources and landscape, or the logic of the visitor experience.
- Permanent exhibit stations with excessive electronic media and interventions were considered contemporary intrusions on the landscape.
- Observation platform over the James River seemed dissonant to and competitive with the dramatic excavations of the real 1607 James Fort site.

2.4.2 Joint Visitor Center at the Jamestown Settlement

Having a combined NPS/APVA/Jamestown-Yorktown Foundation Visitor Center at the Settlement was rejected for several reasons. First, an interpretive introduction to Jamestown Island is fundamentally different than an interpretive introduction to the Jamestown Settlement. Secondly, facilities would still be needed at Jamestown Island, such as restrooms, shelter from the elements, offices

for employees, artifact storage/curation, and educational facilities. Thirdly, there would be a decrease in visitation to Jamestown Island due to visitors staying where their cars are parked at Jamestown Settlement. And finally, some visitors would only be interested in the Jamestown Island experience and would have no need nor interest in going to an orientation facility at Jamestown Settlement.

2.4.3 Reconstruction of the Ludwell Statehouse Group

Prior to the joint effort by the APVA and National Park Service, the APVA proposed a total reconstruction of the Ludwell Statehouse Group based on research by the APVA and other architectural historians. The building would be located at the original site of the Ludwell Statehouse Group: at the west end of the historic site. Planning team members rejected the total reconstruction of this structure for various reasons. Most importantly, the site contains sensitive burial and archaeological sites, and the archaeology has not been completed. There is also a question of the accuracy of such a reconstruction, though Colonial Williamsburg and the APVA have done an excellent job with their research of the original buildings. In addition, the original footings in the Statehouse Group would not support new structures. Finally, based on the proposed alternatives for the Jamestown Project, a fully reconstructed building would offset the balance within the Townsite and would be very expensive.

2.4.4 No Building on the Site of the Existing NPS Visitor Center

An alternative suggested by the *General Management Plan for Colonial NHP* (NPS 1993b) was that the existing 1956 Visitor Center be removed and the site allowed to revegetate. Planning team members considered this as an option; however, in order to meet an essential element of the *Jamestown Island*

Interpretive Plan (Haley Sharpe Design 2001b), a small building would be essential within the Townsite. The proposed structure, the Observation Building, embodies the interpretive approach to the whole visitor experience. Sitting as it does at the pivotal point of the historic site, it is the ideal place to make connections. Artifacts are displayed here within thematic interpretive contexts, themselves based on personal stories.

In addition, this particular site is a high point within the landscape and an excellent location for observation and views over the historic heart of Jamestown Island. The visitors would be able to view the collections as close as practicable to the historic sites where they were found.

2.4.5 Alternative Trail Alignments on Neck of Land and Jamestown Island

The proposed alternative for the hike/bicycle trail in Alternative B from Neck of Land to Jamestown Island was originally aligned along the old road trace to take the shortest possible route with the least impacts to wetland habitat. This alternative and several other proposed trail alignments through the Neck of Land marsh were rejected because of potential impacts to threatened and endangered species discovered within the area. Consultations with NPS representatives, state and federal regulatory agencies, scientific professionals, and local conservation groups helped to determine the proposed trail alignment, as presented in Alternative B.

2.4.6 Combined Jamestown/Yorktown Collections Facility

The NPS/APVA planning team conducted a Value Analysis in June 2001, which found that having the NPS-owned portion of the Jamestown collection housed in a proximate place to the APVA-owned part of the Jamestown collection would benefit

researchers, curators, and the partnership between the two organizations. The Jamestown collection of approximately 1.1 million objects comes from the same place – Jamestown – split only by the accident of property lines and ownership. In some cases, a single object can have pieces owned by both the NPS and APVA. The Jamestown collection is overwhelmingly a 17th century collection while the Yorktown collection is an 18th century one. Subsequently, questions were raised about the possibility of combining the NPS-owned part of the Jamestown museum collection with the NPS-owned Yorktown collection. This was rejected because putting both NPS-owned collections in the same space would permanently separate the two parts of the Jamestown collection (the NPS part and the APVA part).

Not having the NPS part of the Jamestown collection on Jamestown Island with the APVA portion would permanently sever the relationship between the objects and the very land where they were used, “lost”, and recovered. It would make having the full range of changing exhibits much more difficult, would require moving the NPS-owned objects back and forth, and would hamper the partnership of collaborative research and education sought by both the NPS and APVA.

2.4.7 Additional Parking at Glasshouse or NPS Maintenance Facility

In lieu of the proposed parking at Neck of Land, the planning team also considered adding parking at the Glasshouse area or the NPS Maintenance Facility. At the Glasshouse area, parking was proposed north of the existing parking lot between the Jamestown Settlement property line and the Colonial Parkway. This area is not only too small, but also restricted by potential cultural resource impacts. In order to provide an adequate amount of parking, the entire forested area between the Colonial Parkway and the Jamestown Settlement would need to be cleared. This would have a major impact on the Colonial

Parkway, its associated cultural landscape, and the visitor experience. The newly expanded facilities at Jamestown Settlement would be clearly visible, with no vegetated buffer to both travelers along the Parkway and visitors to Glasshouse.

There were also several problems with using the NPS Maintenance Facility for parking. First and foremost, maintenance would either need to be relocated or additional land adjacent to the maintenance yard would need to be acquired. If the maintenance area remained, then the entrance road would need to be realigned to limit the impact of the maintenance yard on the visitor experience. Also, if parking were located on the adjacent land, this would result in direct impacts to wetlands and the community along Neck-O-Land Road. In addition, in order to get to the Neck of Land trail and boat dock, visitors would have to cross the Colonial Parkway, which would require safety measures to be taken (i.e. stop signs, marked crosswalks, tunneling, pedestrian bridge, etc.). This would result in a major adverse impact to the Parkway.

2.5 ALTERNATIVE A: NO ACTION ALTERNATIVE

In Alternative A (Figure 2-1 and Figures 2-6 through 2-8), the No Action Alternative, there would be no construction of new facilities and no infrastructure changes, except to accommodate any current approved plans of the National Park Service and APVA. Also, the NPS artifact collections would remain in the basement of the existing 1956 Visitor Center, at risk of damage and/or loss from flooding and leaks.

Access to Jamestown Island would remain unchanged, with visitors coming on the Colonial Parkway to both the Island and the Settlement. Visitors would also come to Jamestown Island from Route 31 (Jamestown Road) through the Jamestown Settlement property on Route 359 and onto the Colonial Parkway. Jamestown Settlement is

currently proceeding with construction projects for 2007, which will affect how visitors reach Jamestown Island from Route 31. The proposed realignment of Route 359 has been designed to travel around the Jamestown Settlement parking lot, effectively separating pedestrian traffic from vehicular traffic. Mostly for safety reasons, a new connection to the Colonial Parkway will also be constructed.

ALTERNATIVE A FACILITIES SUMMARY

Visitor Center – **30,000 sf**

Includes **300 sf** comfort station

Includes **4,000 sf** collections storage/curatorial lab

There would be no pedestrian/bicycle path beyond the use of the Colonial Parkway, as it exists. There would also be no facility to accommodate boat access to the Island. The Jamestown Explorer currently gives boat tours originating at the Jamestown Marina and continuing through Powhatan Creek and Back River and under the Sandy Bay Bridge to the James River. This tour provides views of the Island only; it does not dock at the Island or provide access.

Visitors would continue to go through the staffed gatehouse, stopping there for ticketing and orientation. Visitors would drive to the Island, then park, and walk to the existing Visitor Center.

Neck of Land would remain in its present condition, and Glasshouse Point would retain its existing facilities. The existing problems at the Glasshouse parking lot would not be remedied by this alternative. The current parking lot does not meet the design requirements for buses, causing backups within the constrained area for both cars and buses.

2.6 ELEMENTS COMMON TO THE ACTION ALTERNATIVES

Several elements are common to each action alternative and create a foundation from which Alternatives B, C, D, and E were developed. The alternatives include additional elements and form a reasonable range of actions. The common elements include:

Glasshouse Point

The parking at Glasshouse Point would be reconfigured to accommodate 31 cars and 12 buses. The original circulation concept would be retained, as it is part of the cultural landscape. This common element is a response to current bus back-up problems, which generate safety issues on the Colonial Parkway and at the entrance to the Glasshouse parking.

Pedestrian/Bicycle Path

There would be a separate gated pedestrian/bicycle path on NPS property from the Glasshouse to the entrance of Jamestown Settlement.

Loop Drive

The Loop Drive would remain in its current location and condition, with new interpretation on the wayside signage.

Shade and Seating

Visitors would be provided with shade and seating throughout the project area at major facilities, at important site venues, and along the circulation system over the landscape.

Food and Restrooms

Visitors would be provided with food and restrooms in the major facilities and at the east anchor interpretive exhibit on the historic site.

Walkway Transition (Hub)

A walkway transition (hub) or point of choice would be provided on the historic site. Here, visitors would be introduced to the site and presented their options for experiencing the various site venues and

exhibits. They could choose to go to the 1607 James Fort Site, the Ludwell exhibit facility (west anchor), the Townsite, or the Agricultural exhibit area (east anchor). This “hub” would be located around the 1907 obelisk, with site modifications to include removal of the pear trees (non-native plant material) and improvement of damaged paving and circulation patterns.

Agricultural Exhibit Area

The Agricultural exhibit area would form the eastern anchor of the historic site. Visitors would be drawn to the far eastern end of the Townsite by activities and exhibits focusing on agricultural aspects of Jamestown’s history, potentially including an experimental archaeology site. The site does not relate directly to historic remains found beneath it, but would be representative of the kinds of agricultural activity conducted on the Island. This exhibit would provide an opportunity for visitors to see the types of crops and agricultural methods of the early settlers. By having features located at various and distinct parts of the Island, visitors would have several choices to structure their experience and to interact with the exhibits.

Ludwell Exhibit Facility

The Ludwell exhibit facility would anchor the western end of the historic site. The exhibit space would be located in a 7,500 square foot facility on APVA property, and it would house artifacts from the Townsite. Experimental archaeology would also occur at the Ludwell site. Archaeologists, craftspeople, and students/interns could be seen demonstrating 17th century building techniques, using the evidence found on the Island. The archaeological process would be examined here and linked directly back to the human stories of the site. The strong evidence in the general vicinity of this area relating to issues of life and death at Jamestown would also be presented, focusing especially on research conducted on the “potter’s field” type of burial site. The opportunity also exists here to emphasize the Ludwell Statehouse Group, which is one site where the first government meetings were held and legislative decisions were made.

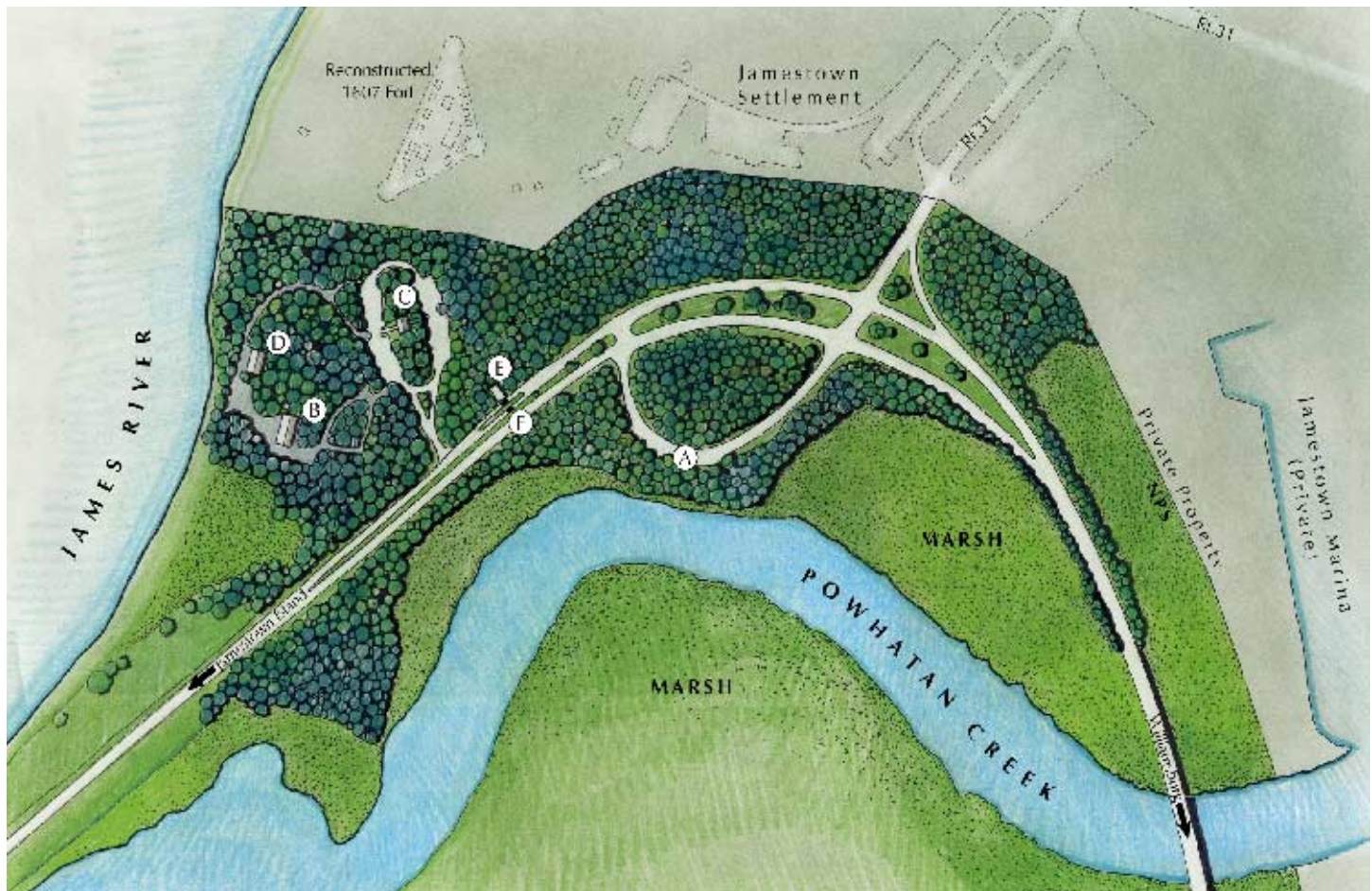


Not to Scale

Key

- A. Parking: 333 Cars; 25 Buses
- B. Pedestrian Bridge to Visitor Center
- C. Visitor Center & NPS Collections
- D. Original 1607 Fort Site
- E. 1907 Monument
- F. Jamestown Rediscovery^(TM) Center
- G. Dale House
- H. Ludwell Site
- I. Church

Figure 2-6: Alternative A - Jamestown Island

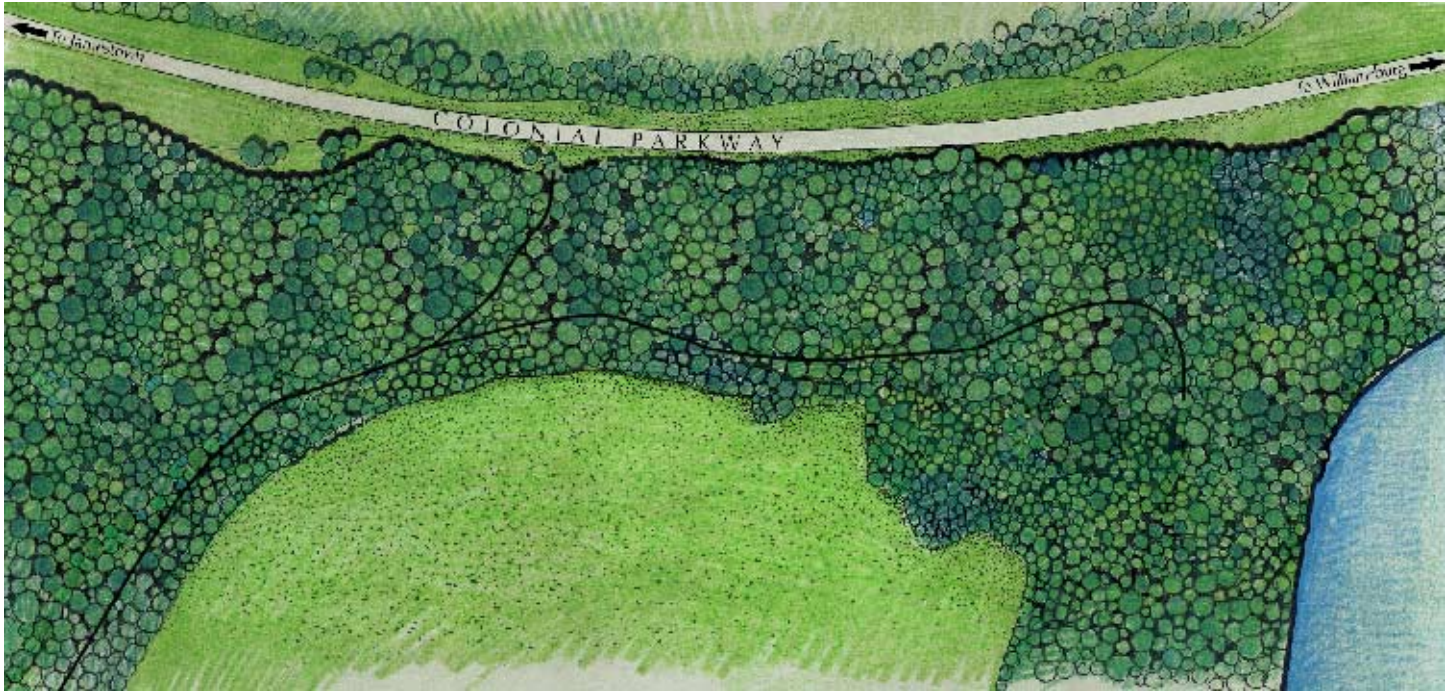


Not to Scale

Key

- A. Powhatan Creek Overlook
- B. Glasshouse
- C. Restroom
- D. Glasshouse Exhibit
- E. Ranger Office
- F. Staffed Gatehouses

Figure 2-7: Alternative A - Powhatan Creek Overlook



Not to Scale

Figure 2-8: Alternative A - Neck of Land

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Ambler House

An observation platform would be located in the Ambler House ruins. A new platform constructed at the second-floor level would provide an excellent view of the surrounding 17th century Townsite and a better understanding of how the elements of the site interact. The house ruin is currently on the highest point in the landscape and commands views up and down the Townsite and across the James River. The viewing platform could be an independent structure system within the ruin and would contact the original walls for the purpose of saving and protecting those walls, which are currently in need of support.

Ranger Station

The ranger station at the existing entrance to Jamestown Island would remain either as gatehouse support or Glasshouse support, depending on the action alternative.

Comfort Station and Pedestrian Bridge

The existing comfort station and pedestrian bridge at the NPS parking lot on Jamestown Island would be removed in all the action alternatives. A relocated pedestrian bridge is proposed under all alternatives.

2.7 ALTERNATIVE B: PREFERRED ALTERNATIVE

The following description provides detailed information about the physical aspects specific to Alternative B. Figures 2-9 through 2-11 depict the specific facilities associated with Alternative B.

ALTERNATIVE B FACILITIES SUMMARY

Visitor Center/educational facility	19,000 sf
Collections storage, research, and curatorial	8,000 sf
Intermodal Transportation Terminal	2,000 sf
Observation Building	5,000 sf
TOTAL	34,000 sf

2.7.1 Facilities

Intermodal Transportation Terminal at Neck of Land

Visitors traveling to Jamestown both on the Parkway and Jamestown Road (Route 31) become confused when they arrive at the historic site. Most are not aware of the existence of two Jamestowns: Jamestown Settlement, the state-operated living history site, and Jamestown Island, the Original Site. Visitors may plan on visiting Jamestown Island, but end up at the Settlement because of the confusion. Neck of Land is a logical gateway to orient the visitor to both the Settlement and Jamestown Island. An Intermodal Transportation Terminal here would give visitors basic choices from the Colonial Parkway, including information about alternative modes of transportation to the Island. Visitors traveling to the area from Jamestown Road (Route 31) would be directed via improved signage to the Neck of Land facility first. The 2,000 square-foot building would be closed from December through March. However, outdoor signage and exhibits would give visitors information and options for transport and continue the interpretive experience throughout the year.

Replacement Visitor Center/Educational Facility

This facility would be located in the existing Island parking lot. This site was chosen to place the facility out of the 100-year flood zone and within easy walking distance to the Jamestown Rediscovery™ Center, the proposed Observation Building, and the historic Townsite. The first choice of the site location, west of the proposed location, was eliminated well into the planning process with the discovery of significant archaeological features in this area. The replacement Visitor Center/ educational facility would be 19,000 square feet, comprised of one-story buildings connected by walkways. This would create a campus-like setting for the buildings in keeping with the scale and carrying capacity of the Island. Educational facilities in the building would include classrooms and multi-purpose rooms to accommodate new programming and large school groups.

APVA and NPS Collections and Research Facility

Alternative B would include an 8,000 square foot expansion to the existing APVA Jamestown Rediscovery™ Center. This expansion would accommodate the NPS portion of the Jamestown collection and would provide a state-of-the-art research and curation facility that would be shared with the APVA. The NPS collection, currently in the basement of the existing Visitor Center, is at risk of damage and/or loss from leaks and flooding. Relocation to the expanded Jamestown Rediscovery™ Center would place the NPS collections above the 500-year flood zone elevation (9.8 feet), with the floor level elevation matching that of the Jamestown Rediscovery™ Center (approximately 10.15 feet above sea level).

Structural features of the facility would include a combination of reinforced cast-in-place concrete and pre-cast concrete. Foundations would be short concrete columns, pile caps, and auger-cast concrete piles. Exterior materials would be brick masonry to match existing brick detailing at the Yeardley House. Non-combustible roofing could be concrete shingles or slate, similar to that used in the Colonial Williamsburg restored area. American Association of Museum standards would set the criteria for HVAC, fire protection, and other building systems. An emergency generator would be employed to ensure protection of the collections during power outages. Firewalls, fire doors, and fire shutters would be used to protect the collections from adjacent spaces or structures. In addition, plans exist to connect the Jamestown Rediscovery™ Center and other APVA structures to public sewer and water. These plans are currently on hold so the Jamestown Project needs will be included as well.

The consulting structural and mechanical engineers have been responsible for designing structural systems for several facilities that required special consideration due to the potential of high water and hurricane winds in the area. To protect the Jamestown collection from high water or storm surge, the structure would also be elevated. This

would be accomplished using pile foundations or tall CMU (concrete masonry unit) foundation walls, based on the requirements of the owners, budgetary constraints, and the NPS value analysis process. Based on code considerations and the hurricane wind load factor for the Jamestown area, all aspects of the structural system, from main frame bracing to the attachment of the roof, would be designed for the appropriate higher wind loads. Design for wind uplift is accomplished by using specialized connection and anchorage details.

Observation Building

This facility would be a modification of the existing 1956 Visitor Center, which would be substantially downsized. In addition, the existing pedestrian bridge and terrace access would be removed, and a new one would be constructed, leading visitors to the western side of the building (described below). The new Observation Building would be approximately 5,000 square feet and would be the key interpretive facility on the Island. The Observation Building, located on an elevated portion of the Island, would establish a relationship between the building and the landscape and link interpretive stories to the existing landscape.

Restrooms

Restrooms would be provided at the Neck of Land Intermodal Transportation Terminal, the replacement Visitor Center/educational facility, the Observation Building, the Ludwell exhibit facility, the Dale House, and the Agricultural exhibit area. The restrooms at the Agricultural exhibit area would be connected to water/sewer lines.

Dale House

The interior of the existing Dale House would be renovated for provision of “lite fare” food and drinks. The site would provide seating, shade, and beautiful vistas to the James River. There would be minimal changes to the site of the Dale House in order to enhance the visitor experience, accommodate visitor needs at this facility, and improve site circulation.

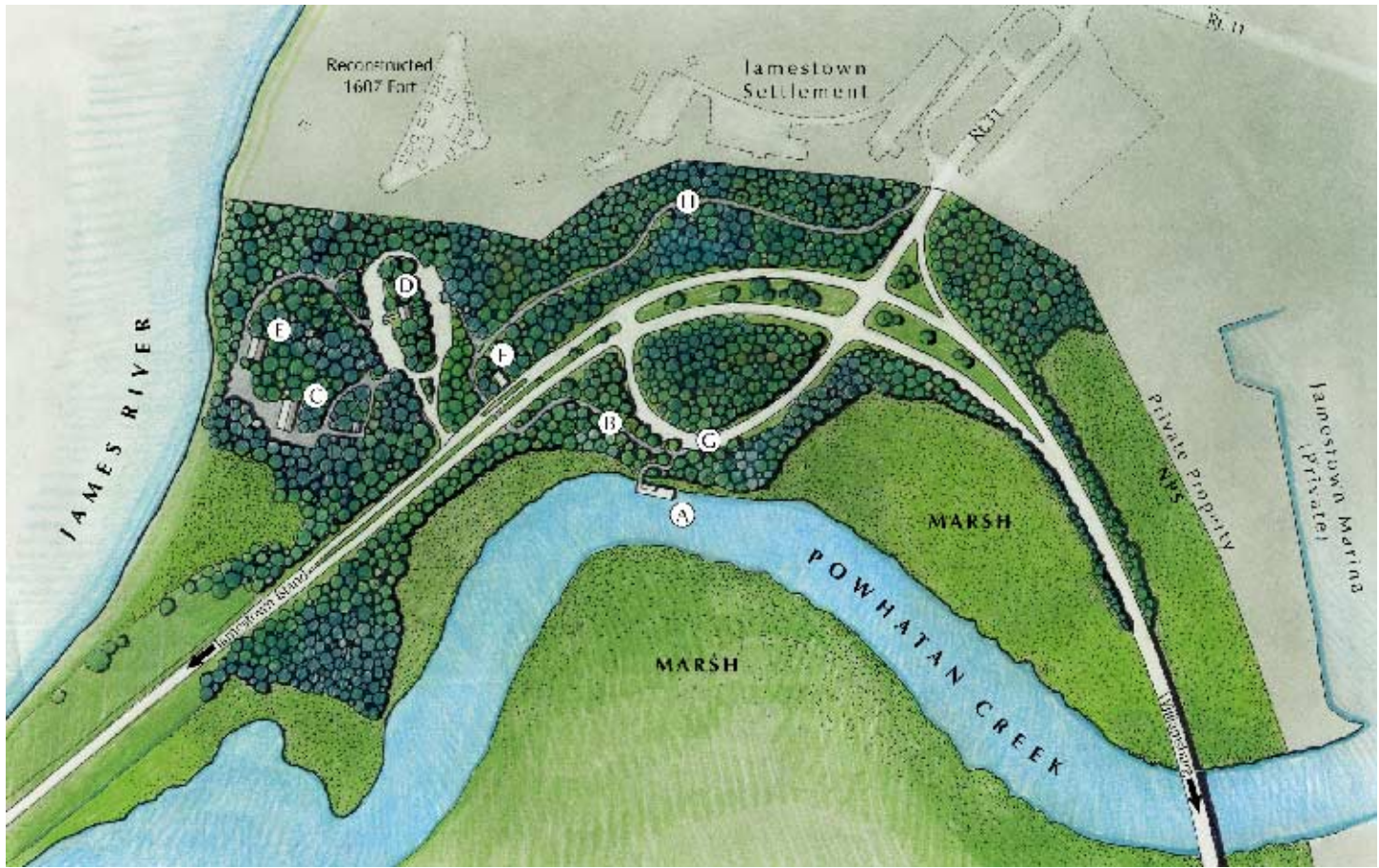


Not to Scale

Key

- A. Hike / Bicycle Path over Marsh
- B. Hike / Bicycle Bridge over Back River
- C. Boat Dock
- D. Parking and Modal Transfer
100 Cars; 25 Buses
- E. Visitor Center / Educational Facility
- F. Pedestrian Bridge to Observation Building
- G. View to Historic Landscape
- H. Observation Building
- I. 'Hub' Walkway Transition
- J. Original 1607 Fort Site
- K. Joint Collections, Storage, Research
and Education Facility
- L. Ludwell Exhibit Facility
- M. Path from Boat Dock

Figure 2-9: Alternative B - Preferred Alternative - Jamestown Island



Not to Scale

Key

- A. Proposed Boat Dock
- B. Proposed Trail
- C. Glasshouse (Existing)
- D. Restroom (Existing)
- E. Glasshouse Exhibit (Existing)
- F. Ranger Office (Existing)
- G. Powhatan Creek Overlook (Existing)
- H. Proposed Hike / Bicycle Path to Jamestown Settlement

Figure 2-10: Alternative B - Preferred Alternative - Powhatan Creek Overlook



Not to Scale

Key

- A. Colonial Parkway Entrance to Neck of Land
- B. Intermodal Transportation Terminal
- C. Parking and Modal Transfer
250 Cars; 15 Buses
- D. Walkway from Boat Dock
- E. Boat Dock on Back River
- F. Hike / Bicycle Path on Existing Road Trace

Figure 2-11: Alternative B - Preferred Alternative - Neck of Land

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Entrance Booths 1 and 2

The entrance booths (gatehouses) to Jamestown Island would be removed under Alternative B. An electronic gate that could close the Island after hours would provide security. Visitors coming to Jamestown would either pay for their visit at the Intermodal Transportation Terminal at Neck of Land or the replacement Visitor Center/educational facility on the Island. The APVA and NPS are also currently looking at new marketing concepts on the Internet and at partnering with Colonial Williamsburg for transport to and joint ticketing for Jamestown.

2.7.2 Transportation

Parking

Parking for Alternative B would be split between the facility at Neck of Land and the replacement Visitor Center parking lot (existing) at Jamestown Island. Neck of Land would have parking for a maximum of 250 cars and 15 buses, while the Island would have parking for 100-150 cars and 25 buses. The proposed parking numbers are based on initial results of the *Alternative Transportation System Study* (BRW and Cambridge Systematics 2001) and analysis by Vanasse Hangen Brustlin, Inc. (see “Section 4.8: Impacts to Transportation and Site Access” and Appendix J). The second phase of this study is currently in progress and will provide additional data and analysis to help refine the preliminary recommendations. The proposed Visitor Center/education facility location would remove most of the Island spaces (currently 358 total spaces). The remaining parking area would be reconfigured to allow for improved bus turnarounds and drop-offs, pedestrian walkways, and green space.

The parking on Neck of Land would be phased in, with capacity for 150 cars built first and the additional 100 spaces as needed. Parking at Neck of Land would support the gateway experience and facility and would accommodate the use of alternate modes of transportation and a healthy carrying capacity for the Island.

Waterborne Transportation

Three boat docks would allow for water transport between Neck of Land, Jamestown Island, and the Powhatan Creek Overlook near Jamestown Settlement. Visitors would embark at Neck of Land and disembark at Jamestown Island or continue to the Powhatan Creek Overlook. Visitors may also embark at Neck of Land for an hour-long interpretive tour. Both water transport to the Island and the tour would offer a new opportunity to tell interpretive stories that are currently not being told. The Virginia Indians and first colonists all used water more than roads for transportation. Interpretive opportunities also include the bald eagles, osprey, and other wildlife, as well as marsh ecology and plant species.

Modal Transfer Opportunities

Neck of Land, Jamestown Island, and the Powhatan Creek Overlook would provide visitors the opportunity to change their mode of transport. The Neck of Land facility would have parking for buses (and bus turnarounds) a boat dock, and the trailhead for the pedestrian/bicycle path through Neck of Land marsh. Visitors would park at Neck of Land and take a shuttle bus to the Island or to Powhatan Creek Overlook. They could also park and get on the boat transport to the Island or to Powhatan Creek Overlook. Also, they could access the new pedestrian/bicycle path, marsh boardwalk, and bridge and go to the Island on foot or by bicycle. Pedestrian/bicycle travel from the Island to Glasshouse Point, Powhatan Creek Overlook, and Jamestown Settlement, or back to Neck of Land from these areas would be on the current Colonial Parkway pavement. This system of transportation options for visitors would encourage alternative means of transport and unique interpretive opportunities for the approach to Jamestown.

Pedestrian/Bicycle Path

The pedestrian/bicycle path would begin on Neck of Land at the Intermodal Transportation Terminal and would follow the old (pre-1957) road trace over

Neck of Land. The asphalt still remains on most of this road and would be used for the pedestrian/bicycle path until reaching the tree line-marsh interface where it would traverse through the marsh (away from the old roadbed to the east) as an elevated boardwalk until reaching the Back River.

Based on the existence of rare, threatened, and endangered species within the Jamestown Project area, design and construction of the boardwalk would be sensitive to species and habitat disturbances and requirements. The boardwalk would be approximately 12 feet wide to allow safe passage of bicycles and pedestrians going in opposite directions, and it would be placed at an appropriate height to allow for sunlight penetration to the wetland species below. The boardwalk would be composed of environmentally sensitive materials (i.e. those that limit leaching of harmful chemicals) and top-down construction would be used.

The boardwalk would offer an opportunity for natural resource interpretation (habitat, wetlands, threatened and endangered species), as well as tell the story of the Virginia Indians. Design and construction of the boardwalk would be in character with this unique site and would use sustainable and site-compatible materials and colors. Pedestrians and cyclists could continue from the new boardwalk to the replacement Visitor Center or get on the existing Colonial Parkway and walk or ride a bicycle to Powhatan Creek Overlook by Jamestown Settlement or back to Neck of Land to complete the entire pedestrian/bicycle loop. A separate pedestrian/bicycle path would also take visitors from the Glasshouse to the entrance of the Jamestown Settlement. In addition, these pedestrian bicycle paths would provide connections to the network of regional bicycle trails developing in the area.

Pedestrian/Bicycle Bridge Across Back River

A new pedestrian/bicycle bridge would connect the marsh boardwalk to Jamestown Island. The bridge would be high enough to ensure boat transport

safety. The projected height of the bridge is the same as the existing Sandy Bay Bridge, 14-14.5 feet above mean high tide. In addition, the bridge would be approximately 12-14 feet in width and universally accessible from both the marsh boardwalk and the Island parking lot. The marsh boardwalk and path from the Island would ramp gradually to the bridge in compliance with Americans with Disabilities Act (ADA) standards. Design and construction of this bridge would be in character with this unique site using sustainable and site compatible materials and colors. Historic photographs of the bridge that once connected Neck of Land and Jamestown Island are available for historical reference in design development.

Pedestrian Bridge from the Replacement Visitor Center to the Observation Building

A new pedestrian bridge would connect the replacement Visitor Center and the Observation Building. The location of the existing footbridge is not consistent with the proposed visitor experience where an expansive view of the site is required. In addition, the new footbridge would be at a height that allows sunlight penetration to the wetland below. It would give visitors specific views over the historic and commemorative landscape of the APVA property and out to the James River. Design and construction of this pedestrian bridge would reflect the character of the site and would use sustainable and site compatible materials and colors. The bridge would connect to the Observation Building, which visitors could enter or proceed on to the “hub” at the base of the 1907 monument where they would review their options for experiencing the historic site. The existing 1976 pear trees would be removed and the paving would be modified to repair problems and ensure accessibility under the Americans with Disabilities Act.

Access to Jamestown Island

An electronic security gate (in the vicinity of the existing gatehouses) would be used for access by employees, researchers, and emergency workers when Jamestown Island is closed.

2.7.3 Road Modifications

Modifications to the Parkway at Neck of Land

To safely accommodate the left turn into the Neck of Land Intermodal Transportation Terminal, the Colonial Parkway would be widened a maximum of 50 feet. The widening would include a median, and the Parkway would be tapered gradually to accommodate the change. Design and construction of this piece of the Parkway would be sensitive to the historical integrity of this cultural resource.

2.8 ALTERNATIVE C

Alternative C differs from B in several ways. The amount of development on Neck of Land would be more extensive, and the new Visitor Center would be removed from Jamestown Island. Alternative C would locate the NPS collections, the Intermodal Transportation Terminal, and the Visitor Center on Neck of Land. Included with the facilities would be parking spaces for 300 cars and 20 buses. Alternative C would encourage vehicles to stay off the Island except for staff and operations trucks. In addition, a small ticketing facility would be located in the existing Visitor Center parking lot.

The following description provides detailed information about the physical aspects specific to Alternative C, which are depicted by Figures 2-12 through 2-14.

ALTERNATIVE C FACILITIES SUMMARY

Visitor Center	18,000 sf
Collections storage, research, and curatorial	8,000 sf
Intermodal Transportation Terminal	2,000 sf
TOTAL	28,000 sf*
*Combined square footage and functions in one building.	
Ticket facility on Island	1,000 sf
Observation Building	5,000 sf
TOTAL	34,000 sf

2.8.1 Facilities

Visitor Center / Intermodal Transportation Terminal / NPS Collections Storage and Research

These facilities would be located in a complex of one-story buildings on Neck of Land to minimize vehicular traffic to Jamestown Island, to enhance the tranquil nature of the Island, and to encourage alternative modes of transportation to the Island. The NPS collections would also be in this facility, above the 500-year flood zone. This facility would also function as a major gateway to both the region and the Jamestown Project so visitors could immediately understand their options for going to Jamestown Settlement and to Jamestown Island.

Jamestown Rediscovery™ Center

The APVA collections and storage would remain in this facility on the Island. In order to accommodate changes at the Dale House, exhibits and lab functions would be moved to this facility as well.

Ticketing Facility on the Island

This building would be located in the existing Island parking lot and would provide arriving visitors with tickets and information specifically about the historic site. This facility would also provide vending machine food and drinks.

Observation Building

This facility would be exactly as proposed and described under Alternative B.

Restrooms

Restrooms would be provided in the Visitor Center/Collections/Intermodal Transportation Terminal facility on Neck of Land, the Observation Building, the Dale House, the Ludwell exhibit facility, and the Agricultural exhibit site (water/sewer connected).

Dale House

Changes to the Dale House would be the same as those proposed under Alternative B.

Entrance Booths 1 and 2

The entry booths (gatehouses) to Jamestown Island would remain, staffed by NPS rangers.

2.8.2 Transportation

Parking

The majority of parking in Alternative C would be on Neck of Land (300 spaces for cars and 20 spaces for buses), removing most vehicular traffic from the Island. Parking on Jamestown Island would accommodate 50 cars and 25 buses. The remainder of the parking lot would become pedestrian-oriented, with walks and picnic areas. Bus drop-off on the Island would also be provided. Visitors would be encouraged to use alternative methods of transportation to reach Jamestown Island. Parking on Neck of Land would preserve the tranquil nature of the Island and would provide great opportunities for interpretation during the arrival experience to Jamestown Island.

Waterborne Transportation

Waterborne transport options and interpretive tours would be as proposed and described under Alternative B.

Modal Transfer Opportunities

Neck of Land, Jamestown Island, and Powhatan Creek Overlook would provide visitors the opportunity to change their mode of transport. The Neck of Land facility would have bus parking and turnarounds and a boat dock. Visitors could park at Neck of Land and take a shuttle bus or boat to the Island or to the Powhatan Creek Overlook. Visitors could also reach these areas by bicycle on the Colonial Parkway. Travel from the Island to Glasshouse Point, to Powhatan Creek Overlook, and Jamestown Settlement, or back to Neck of Land would also be on the current Colonial Parkway pavement. This system of transportation and options for visitors would encourage alternate means of transport and unique interpretive opportunities for the approach to Jamestown.

Pedestrian/Bicycle Path

The pedestrian/bicycle experience could begin at Neck of Land, by following the existing pavement of the Colonial Parkway to reach both the Glasshouse and Jamestown Island. There would be a separate pedestrian/bicycle path from the Glasshouse to the entrance to Jamestown Settlement. Once on the Island, visitors could see the historic site or continue to hike and bike on the Loop Drive.

Pedestrian Bridge from the Island Ticketing Facility to the Observation Building

A new pedestrian bridge would connect the ticketing facility and the Observation Building. Unlike the existing bridge, it would be at a height that allows the wetlands below to flourish. It would give visitors specific views over the historic and commemorative landscape of the APVA property and out to the James River. Design and construction of this pedestrian bridge would reflect the character of the site and would use sustainable and site compatible materials and colors. The footbridge would connect to the Observation Building, which visitors could enter or proceed on to the “hub” at the base of the 1907 monument, where they would review their options for experiencing the historic site. The existing 1976 pear trees would be removed and the paving would be modified to repair problems and ensure universal accessibility.

2.8.3 Road Modifications

Modifications to the Parkway

To safely accommodate the left turn into the Neck of Land facilities, the Colonial Parkway would be widened a maximum of 50 feet. The widening would include a median, and the Parkway would be tapered gradually to accommodate the change. Design and construction would be sensitive to the historical integrity of this historical resource and its associated cultural landscape.

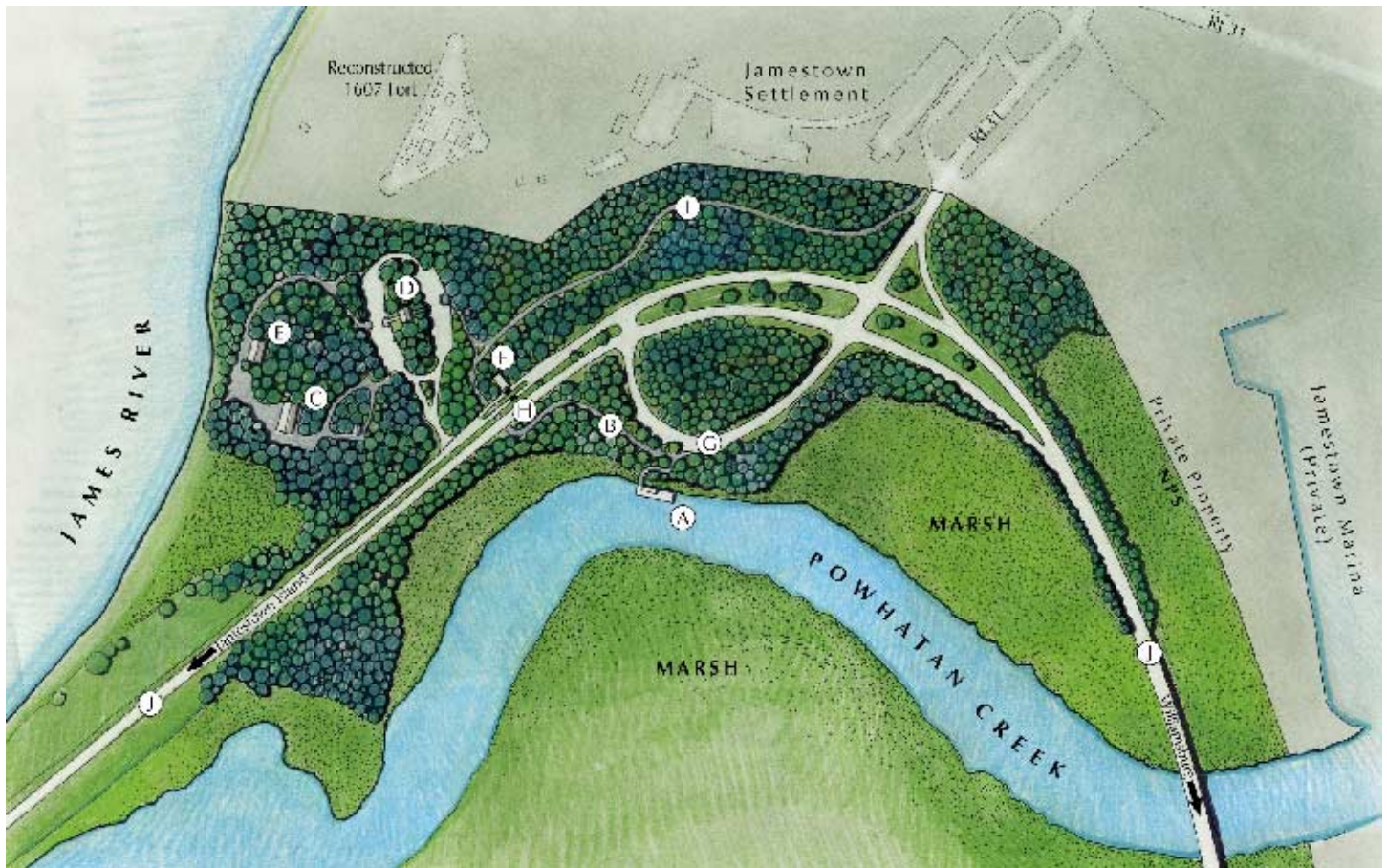


Not to Scale

Key

- A. Boat Dock
- B. Path from Boat Dock
- C. Parking and Modal Transfer
50 Cars; 20 Buses
- D. Ticketing / Staff Facility
- E. Pedestrian Bridge to Observation Building
- F. View to Historic Landscape
- G. Observation Building
- H. 'Hub' Walkway Transition
- I. Original 1607 Fort Site
- J. Jamestown Rediscovery™ Center
- K. Ludwell Exhibit Facility

Figure 2-12: Alternative C - Jamestown Island



Not to Scale

Key

- A. Proposed Boat Dock
- B. Proposed Trail
- C. Glasshouse (Existing)
- D. Restroom (Existing)
- E. Glasshouse Exhibit (Existing)
- F. Ranger Office (Existing)
- G. Powhatan Creek Overlook (Existing)
- H. Staffed Gatehouses (Existing)
- I. Proposed Hike / Bicycle Path to Jamestown Settlement
- J. Bicycle Path Remains on Colonial Parkway

Figure 2-13: Alternative C - Powhatan Creek Overlook



Not to Scale

Key

- A. Colonial Parkway Entrance to Neck of Land
- B. Intermodal Transportation Terminal / Visitor Center / Collections Facility
- C. Parking and Modal Transfer
300 Cars; 20 Buses
- D. Walkway from Boat Dock
- E. Boat Dock on Back River
- F. Old Road Trace (pre - 1957)
- G. Bicycle Path Remains on Colonial Parkway

Figure 2-14: Alternative C - Neck of Land

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2.9 ALTERNATIVE D

Alternative D differs from both Alternatives B and C because no development is proposed on Neck of Land and no alternative modes of transportation could be used except buses from Colonial Williamsburg that go straight to the Island or hiking and biking on the existing Colonial Parkway. Alternative D also differs from the other alternatives in the scale, design, and location of the Visitor Center / educational facility. In this alternative, the Visitor Center, NPS collections and research, educational facilities, and the Observation Building would be accommodated in one large building with three stories. Collections would be relocated from the basement to the third floor in order to place them above the 500-year flood zone. Expansion of the existing 1956 Visitor Center would cause additional intrusion into the historical site.

ALTERNATIVE D FACILITIES SUMMARY

Visitor Center	19,000 sf
Collections storage, research, and curatorial	8,000 sf
Observation Building	5,000 sf
TOTAL	28,000 sf*

*Combined square footage and functions in one building.

The following description provides detailed information about the physical aspects specific to Alternative D, and Figures 2-15 through 2-17 depict the details of Alternative D.

2.9.1 Facilities

Visitor Center, Educational Facility, Observation Building, and NPS Collections/Research Facility

This facility would be located on Jamestown Island and would be an enlarged modification of the existing Visitor Center. This building would serve visitors with orientation, food, restrooms, retail, exhibits, educational classrooms, and views and interpretation of the historic site. The facility would provide researchers with access to the collections and research opportunities in very close proximity to the source of the artifacts and ongoing archaeology.

Jamestown Rediscovery™ Center

As in Alternative C, the existing facility retains the APVA collections, some curation, and storage. Therefore, the APVA and NPS portions of the Jamestown collection would remain separated. Because there are no changes to the current functions of the Dale House, most curation would remain there.

Restrooms

Restrooms would be provided in the Visitor Center complex and the Ludwell exhibit facility. Additional low impact restrooms would be provided at the east end of the historic site, the Agricultural exhibit area.

Dale House

The Dale House would remain as workspace/ exhibit space for the APVA. The exterior would continue to offer visitors some shade, limited seating, and beautiful vistas across the James River. The existing Carrot Tree trailer would remain next to the Dale House as the only food service on the Island.

Entrance Booths 1 and 2

As in Alternative C, the entry booths (gatehouses) to Jamestown Island would remain, staffed by NPS rangers.

2.9.2 Transportation

Parking

In Alternative D, parking would remain in its current location and retain the existing 333 spaces for cars and 25 for buses. Buses could bring visitors from Colonial Williamsburg and drop them at the Visitor Center parking lot. Visitors could also catch a bus in the parking lot to return to the Colonial Williamsburg Visitor Center. There would be no boat transport to Jamestown Island, and pedestrians and cyclists would have to use the existing pavement of the Colonial Parkway because no separate trails would be constructed with the exception of the trail between Glasshouse and Jamestown Settlement.

Pedestrian Bridge from the Island Parking Lot to the Visitor Center

A new pedestrian footbridge would connect the Island parking lot and the Visitor Center complex. Unlike the existing bridge, it would be at a height that allows the wetlands below to flourish. It would give visitors specific views over the historic and commemorative landscape of the APVA property and out to the James River. Design and construction of this pedestrian bridge would reflect the character of the site and would use sustainable and site compatible materials and colors. Visitors could enter the Visitor Center complex or proceed on to the “hub” at the base of the 1907 monument, where they would review their options for experiencing the historic site. The existing 1976 pear trees would be removed and the paving would be modified to repair problems and ensure universal accessibility.

Access to Jamestown Island

As in Alternative C, the entry booths (gatehouses) would remain, staffed by NPS rangers.

2.10 ALTERNATIVE E

Alternative E differs from the other alternatives in that it would locate the NPS collections completely out of the Jamestown Project area and place them in the Williamsburg/James City County area. Alternative E is more similar to Alternative B in that the proposed replacement Visitor Center would be in the same location. Alternative E also has an Intermodal Transportation Terminal at Neck of Land, but the parking on Neck of Land would be less than in B, accommodating 100 cars and 8 buses. The pedestrian/bicycle path in Alternative E would begin on Neck of Land at the Intermodal Transportation Terminal and proceed west over the marsh. Once off the upland area, the path would turn into a boardwalk and cross the Powhatan Creek on a new pedestrian/bicycle bridge. Pedestrians and cyclists could then get on the Colonial Parkway, go to the Glasshouse or Jamestown Settlement, or continue on to Jamestown Island.

ALTERNATIVE E FACILITIES SUMMARY

Visitor Center	19,000 sf
Observation Building	2,500 sf
Intermodal Transportation Terminal	2,000 sf
<u>Collections storage/research/curatorial (off-site)</u>	<u>8,000 sf</u>
TOTAL	31,500 sf
On-site	23,500 sf
Off-site	8,000 sf

The following description provides detailed information about the physical aspects specific to Alternative E. Figures 2-18 through 2-20 depict the details of Alternative E.

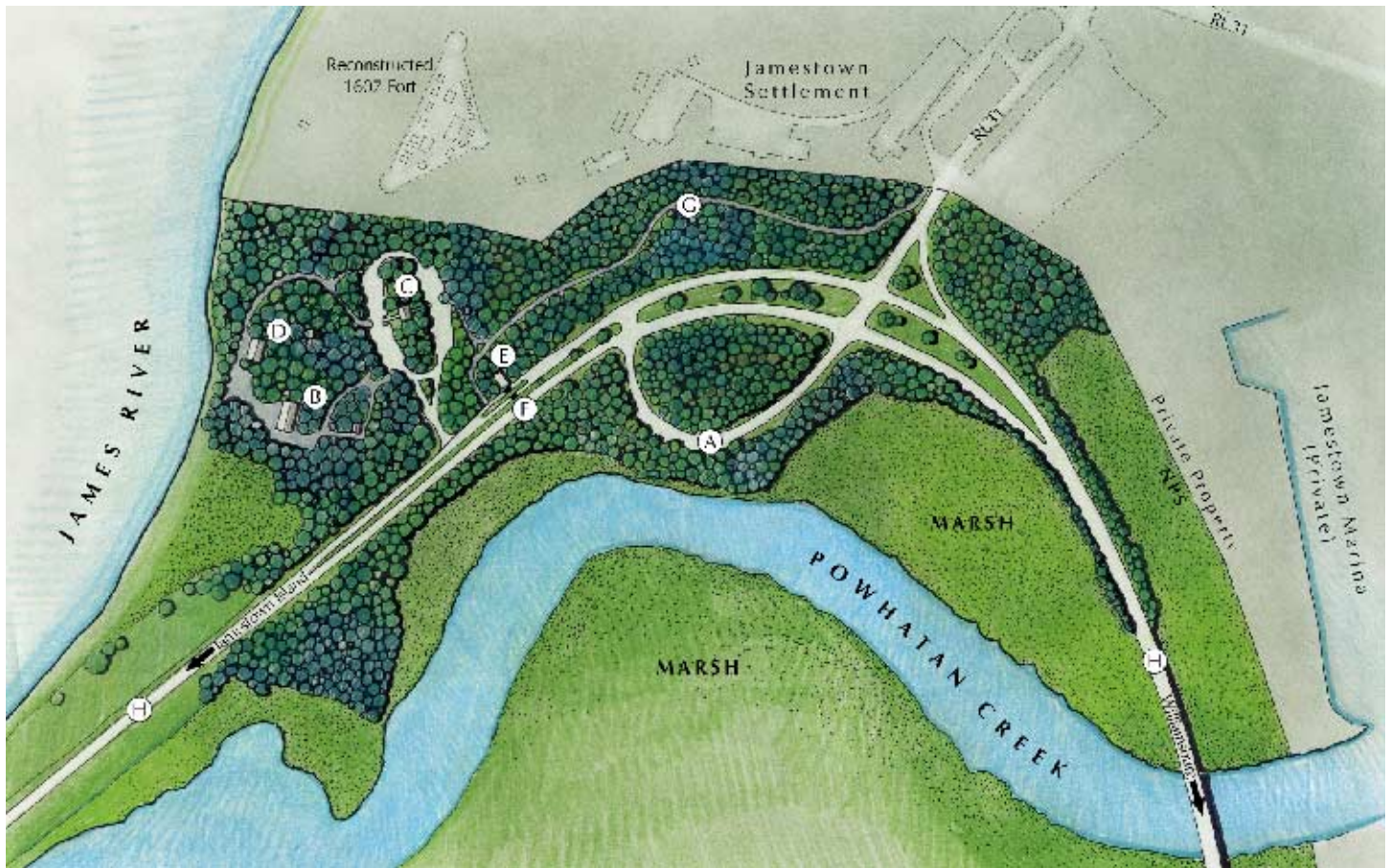


Not to Scale

Key

- A. Parking and Modal Transfer
333 Cars; 25 Buses
- B. Pedestrian Bridge to Visitor Center /
NPS Collections / Orientation Facility
- C. View to Historic Landscape
- D. 3-Story Facility: Visitor Center /
NPS Collections / Orientation Facility
- E. 'Hub' Walkway Transition
- F. Original 1607 Fort Site
- G. Jamestown Rediscovery (TM) Center
- H. Ludwell Exhibit Facility

Figure 2-15: Alternative D - Jamestown Island

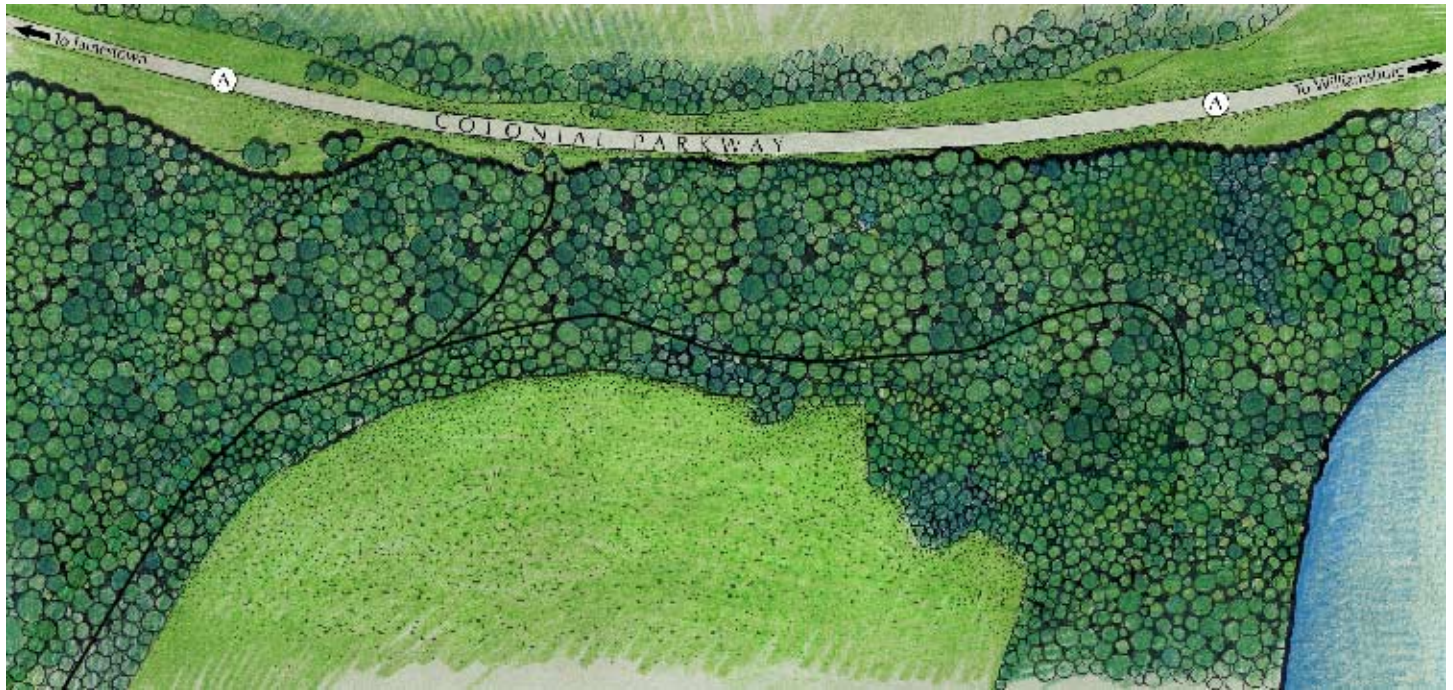


Not to Scale

Key

- A. Powhatan Creek Overlook (Existing)
- B. Glasshouse (Existing)
- C. Restroom (Existing)
- D. Glasshouse Exhibit (Existing)
- E. Ranger Office (Existing)
- F. Staffed Gatehouses (Existing)
- G. Proposed Hike / Bicycle Path to Jamestown Settlement
- H. Bicycle Path Remains on Colonial Parkway

Figure 2-16: Alternative D - Powhatan Creek Overlook



Not to Scale

Key

A. Bicycle Path Remains on Colonial Parkway

Figure 2-17: Alternative D - Neck of Land

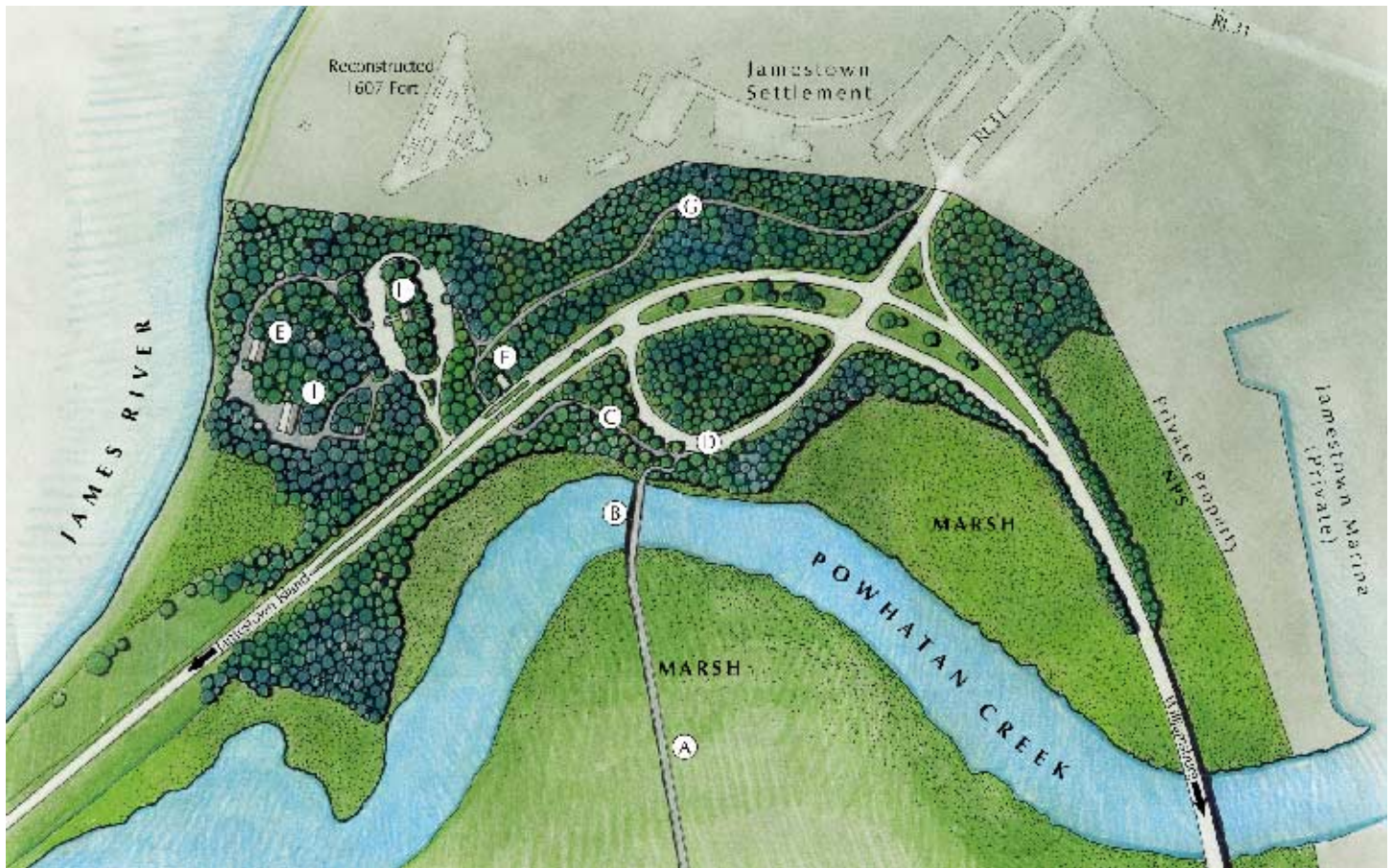


Not to Scale

Key

- A. Boat Dock
- B. Path from Boat Dock
- C. Parking and Modal Transfer
200 Cars; 17 Buses
- D. Visitor Center / Educational Facility
- E. Pedestrian Bridge to Observation Building
- F. View to Historic Landscape
- G. Observation Building
- H. 'Hub' Walkway Transition
- I. Original 1607 Fort Site
- J. Jamestown RediscoveryTM Center
- K. Ludwell Exhibit Facility

Figure 2-18: Alternative E - Jamestown Island



Not to Scale

Key

- A. Hike / Bicycle Marsh Boardwalk
- B. Hike / Bicycle Bridge over Powhatan Creek
- C. Proposed Path
- D. Powhatan Creek Overlook (Existing)
- E. Glasshouse Exhibit (Existing)
- F. Ranger Office (Existing)
- G. Proposed Hike / Bicycle Path to Jamestown Settlement
- H. Restroom (Existing)
- I. Glasshouse (Existing)

Figure 2-19: Alternative E - Powhatan Creek Overlook



Not to Scale

Key

- A. Colonial Parkway Entrance to Neck of Land
- B. Intermodal Transportation Terminal
- C. Parking and Modal Transfer
100 Cars; 8 Buses
- D. Walkway from Boat Dock
- E. Boat Dock on Back River
- F. Hike / Bicycle Path on Neck of Land

Figure 2-20: Alternative E - Neck of Land

2.10.1 Facilities

Intermodal Transportation Terminal at Neck of Land

Visitors traveling to Jamestown both on the Parkway and Jamestown Road (Route 31) become confused when they arrive at the historic site. Most are not aware of the existence of two Jamestowns: Jamestown Settlement, the state-operated living history site, and Jamestown Island, the Original Site. Visitors may plan on visiting Jamestown Island, but end up at the Settlement because of the confusion. Neck of Land is a logical gateway to orient the visitor to both the Settlement and Jamestown Island. An Intermodal Transportation Terminal here would give visitors basic choices from the Colonial Parkway, including information about alternative modes of transportation to the Island. The 2,000 square-foot building would be closed from December through March. However, outdoor signage and exhibits would give visitors information and options for transport and continue the interpretive experience throughout the year.

Replacement Visitor Center/Educational Facility

This facility would be located in the existing Island parking lot. This site was chosen to place the facility out of the 100-year flood zone and within easy walking distance to the Jamestown Rediscovery™ Center, the Observation Building, and the Townsite. The first choice of the site location, west of the proposed location, was eliminated well into the planning process due to the discovery of significant archaeological features. The proposed Visitor Center facility would be 19,000 square feet, comprised of one-story buildings connected by walkways. This would create a campus-like setting for the buildings in keeping with the scale and carrying capacity of the Island. Educational facilities in the Visitor Center would include classrooms and multi-purpose rooms to accommodate new programming and large school groups.

Jamestown Rediscovery™ Center

As in Alternatives C and D, the APVA portion of the Jamestown collection would remain at the Jamestown Rediscovery™ Center. Due to proposed

changes at the Dale House, curation and exhibit would also be accommodated by the Jamestown Rediscovery™ Center.

NPS Collections Facility

This facility would be located in the Williamsburg/James City County area, 15-20 miles away from the Jamestown Project site.

Observation Building

The Observation Building would be a modification of the existing Visitor Center, which would be substantially downsized and the existing pedestrian bridge and terrace access would be removed. The new Observation Building would be approximately 2,500 square feet and would be the key interpretive facility on the Island. The Observation Building, located on an elevated portion of the Island, would establish a relationship between the building and the landscape, linking interpretive stories to the historic Townsite and existing landscape.

Restrooms

Restrooms would be provided at the Neck of Land Intermodal Transportation Terminal, the replacement Visitor Center, the Observation Building, and the Ludwell exhibit facility. In addition, low impact restrooms would be provided at the east anchor of the historic site, the Agricultural exhibit area.

Dale House

The interior of the existing Dale House would be renovated for a donor/volunteer lounge for APVA and NPS staff. The exterior site would continue to offer limited seating, some shade, and beautiful vistas to the James River. The Carrot Tree trailer would remain as the only food service on the Island.

Entrance Booths 1 and 2

As in Alternative B, the entrance booths (gatehouses) would be removed. An electronic gate that could close the Island after hours would provide security.

2.10.2 Transportation

Parking

Parking for Alternative E would be split between the facility at Neck of Land and the Visitor Center at Jamestown Island. Neck of Land would have parking for 100 cars and 8 buses; while the Island would have 200 spaces for cars and 17 spaces for buses. The parking at Neck of Land would be phased with capacity for 50 cars built first and the additional 50 spaces as visitation increases. Parking at Neck of Land would support the gateway experience and would accommodate the use of alternative modes of transportation and a healthy carrying capacity for the Island.

Waterborne Transportation

Two boat docks would allow for boat transport between Neck of Land and Jamestown Island. Visitors could board the boat at Neck of Land and travel to Jamestown Island, disembark there, and later take a boat back to Neck of Land and their parked vehicle. Visitors would also have the option of an hour-long interpretive tour possible around Jamestown Island.

Modal Transfer Opportunities

Neck of Land, Jamestown Island, and Powhatan Creek Overlook could provide visitors with the opportunity to change their mode of transport. The Neck of Land facility would have bus parking and turnarounds, the boat dock, and the trailhead for the pedestrian/bicycle path. Visitors could park at Neck of Land and take a shuttle bus to the Island or to Powhatan Creek Overlook. They could also park and get on the boat transport to the Island. Visitors could also access the pedestrian/bicycle trail and go to the Island on foot or by bicycle. These options would encourage alternative means of transport and unique interpretive opportunities for the approach to Jamestown.

Pedestrian Bridge from the Replacement Visitor Center to the Observation Building

A new pedestrian bridge would connect the replacement Visitor Center with the Observation Building. Unlike the existing bridge, it would be at a height that would allow sunlight to penetrate to the wetlands below. It would give visitors specific views over the historic and commemorative landscape of the APVA property and out to the James River. Design and construction of this pedestrian bridge would reflect the character of the site and would use sustainable and site compatible materials and colors. The bridge would connect to the Observation Building, which visitors could enter or proceed on to the “hub” at the base of the 1907 monument, where they would review their options for experiencing the historic site. The existing 1976 pear trees would be removed and the paving would be modified to repair problems and ensure accessibility under the Americans with Disabilities Act ADA.

Pedestrian/Bicycle Path

The pedestrian/bicycle path would begin on Neck of Land at the Intermodal Transportation Terminal, cross Neck of Land toward the west, and become a boardwalk over the Neck of Land marsh. A pedestrian/bicycle bridge would then cross Powhatan Creek and link with the Powhatan Creek Overlook. The bridge would be the same height as the existing Sandy Bay Bridge (14-14.5 feet above mean high tide). The bridge would be ADA accessible from both the marsh boardwalk and the Powhatan Creek Overlook. The marsh boardwalk and path from Powhatan Creek Overlook would ramp gradually to the bridge in compliance with ADA standards. Design and construction of this bridge would be in character with this unique site, using sustainable and site compatible materials and colors. Pedestrians and cyclists would then have to get on the existing pavement of the Colonial Parkway to go to the Glasshouse, Jamestown Settlement, or Jamestown Island.

Access to Jamestown Island

As in Alternative B, an electronic security gate would replace the gatehouses for after-hours access by employees, researchers, and emergency personnel.

2.10.3 Road Modifications

Modifications to the Parkway

To safely accommodate the left turn into the Neck of Land Intermodal Transportation Terminal, the Colonial Parkway would be widened a maximum of 50 feet. The widening would include a median, and the Parkway would be tapered gradually to accommodate the change. Design and construction would be sensitive to the historical integrity of this cultural resource and its associated landscape.

2.11 COST ANALYSIS

Cost estimates were developed under three categories: the elements in the proposed actions, mitigation, and operational costs. Within the proposed actions, the costs were broken down into the categories of visitor facilities and support, historic structures and sites, transportation and site access, and infrastructure. Costs for these elements were based on the square footages derived for buildings, parking, paths, boardwalks, boat docks, bridges, and expansions of pavement. Estimates were developed using the National Park Service Class C cost estimate figures.

Table 2-3 provides a comparison of the overall costs of the Jamestown Project for each alternative, and Appendix D includes detailed cost estimate breakdowns for each alternative. Costs in this table represent the combined APVA and NPS costs.

Table 2-3: Cost Comparison (Combined APVA and NPS)					
Proposed Action	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Visitor Facilities and Support		\$18,910,361	\$18,910,361	\$18,272,875	\$17,995,722
Historic Structures and Sites		\$586,575	\$586,575	\$400,950	\$586,575
Transportation and Site Access		\$8,599,339	\$4,534,834	\$913,275	\$6,539,293
Infrastructure		<u>\$2,554,200</u>	<u>\$2,999,700</u>	<u>\$1,663,200</u>	<u>\$2,554,200</u>
Total		\$30,650,475	\$27,031,470	\$21,250,300	\$27,675,790
Mitigation	\$418,387	\$922,538	\$922,538	\$510,387	\$922,538
Annual Operational Costs	<u>\$9,770,894</u>	<u>\$11,979,549</u>	<u>\$12,692,657</u>	<u>\$11,010,012</u>	<u>\$11,979,549</u>
Total	\$10,189,281	\$12,902,087	\$13,615,195	\$11,520,399	\$12,902,087
TOTAL	\$10,189,281	\$43,552,562	\$40,646,665	\$32,770,699	\$40,577,877

*NOTE: These costs do not include exhibit costs.
 These costs are gross estimates based on proposed designs.
 Appendix D contains the breakdowns in cost for each alternative.

The total cost estimates for Alternatives B, C, and E are similar, with Alternative B slightly higher than Alternatives C and E. This difference is due to the costs of the hike/bicycle marsh boardwalk and the hike/bike bridge over Back River to Jamestown Island. In comparison, Alternative C has higher costs for parking at Neck of Land and for operations, while Alternative E has the additional cost for locating the collections facility off site. (Cost of a “hardened building” plus the cost of the property available for purchase or lease.) Alternative D has the lowest total cost estimate, but accordingly does not meet the interpretive goals and other key elements set forth in “Chapter 1: Introduction: Purpose and Need for Action.”

The cost estimate for the proposed collections storage/curation/research facility is the same dollar figure per square foot in all the alternatives. This was based on the fact that wherever the facility is located, on or off the Island or in the Williamsburg/James City County area, it would have to meet the design and construction standards for fire, water, wind, and emergency generators for collections facilities.

Appropriate consultant team members with construction experience of similar elements and projects reviewed the estimates to ensure accuracy and probability. For cost estimates related to infrastructure, the engineering consultants devised estimates based on the proposed specifications provided by the design team.

Staff at Colonial NHP and the APVA developed operational costs. As presented in the table, costs include the existing base line (as represented by the No Action Alternative) plus the additional costs for each action alternative.

Mitigation costs were also developed by Colonial NHP, based on NPS Class C cost estimates from the Denver Service Center. Mitigation factors include archaeology, natural resources, and the cultural landscape.

Mitigation costs related to impacts to archaeology cannot be accurately determined at this time because the Section 106 process is being handled through preparation of a Programmatic Agreement. In general, mitigation would include supervision of construction by APVA and NPS archaeologists in all areas. In addition, most mitigation for cultural landscape impacts would require increased vegetative screening. These have been estimated and included in the costs presented in Table 2-3.

In order to mitigate the adverse impacts to natural resources as a result of action alternatives, the following mitigation measures would be undertaken:

- The NPS would fund a Long Term Monitoring Plan to inventory and monitor potential and known impacts to the physical and biological environment. The Long Term Monitoring Plan would use a combination of NPS staff, volunteers, student interns, and cooperative agreements with universities and interagency agreements with other governmental agencies to perform the inventory and monitoring.
- The NPS would monitor effects of boat traffic on shoreline, marsh health, water quality, and eagles. If necessary, NPS will manage and control NPS boat traffic if resources are being adversely affected.
- The NPS would seek funding for a full time GS-11 Biologist to manage the Long Term Monitoring Plan and to conduct some of the monitoring/inventory assignments.
- NPS would reforest and/or convert selected/identified fields to warm season grasses and shrubs as outlined in the Center for Conservation Biology’s Field Biodiversity Plan for Colonial NHP to mitigate the development at Neck of Land.

Reforestation should be directed to meet NPS and Chesapeake Bay Program riparian forest buffer goals. (This also mitigates some cultural landscape impacts, as sited in Chapter 4.)

- Low impact methods for construction of the boardwalk and bridge would be utilized and are part of the construction estimate in Alternative B and Alternative E. In addition, environmentally sensitive building materials would be used, when feasible.
- Stormwater would be managed with guidance and input from the Center for Watershed Protection, the Chesapeake Bay Local Assistance Department, and James City County.
- The NPS would monitor and control invasive species within the reforested/converted field area. This would require an NPS Invasive Control Team for three weeks per year at \$7,895 per week, equaling \$23,685 per year for a period of five years.

As the Jamestown Project moves into the design development phase, cost estimates will become more detailed and specific.

2.12 ENVIRONMENTALLY PREFERRED ALTERNATIVE AND SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The Environmentally Preferred Alternative is defined by the Council on Environmental Quality as “the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act Section 101 (b).” In general, it is the alternative that would be the most beneficial to the environment.

Section 101 (b) states that the Environmentally Preferred Alternative should:

1. “Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.”

Basically, “this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

In addition, the Preferred Alternative is the alternative which the NPS and APVA believe would meet their missions and responsibilities while considering economic, environmental, technical, and other issues. The Environmentally Preferred and Preferred Alternatives may be one in the same; however, this is not always the case.

Because it most completely supports the goals of the proposed action for the Jamestown Project site, including conveying the significance of Jamestown; providing meaningful experiences for visitors of all age, race, or nationality; presenting the story of peoples from three continents and the environment they encountered here; interpreting the unique cultural and natural resources of the project area; and ensuring that the Island's cultural and natural resources are preserved for future generations, **Alternative B is the Preferred Alternative.**

Alternative B also fulfills several of the goals established by CEQ for an Environmentally Preferred Alternative. It would maximize the interpretive use of the resource, while promoting in the most effective way, public recognition of the need to continue to preserve, protect, and cherish the site long into the future (goals 1, 4, and 5). Alternative B maintains a high level of protection to natural and cultural resources while concurrently attaining the widest range of visitor uses of the site without further degradation (goals 2, 3, 4, and 5). The ways in which the principal elements of Alternative B would enhance the visitor experience and help to fulfill the goals of the project and NEPA are summarized below:

- The Jamestown Rediscovery™ Center expansion would offer research opportunities and state-of-the-art storage and protection of APVA and NPS collections. This facility would bring together in a safe location the most important collection of 17th century artifacts in the United States.
- **Transportation options and subsequent new interpretive opportunities** would enhance the visitor experience by telling the stories of the American Indians and African Americans that have not been adequately told.

- The creation of an **Intermodal Transportation Terminal** at Neck of Land would enable visitors to leave their cars and travel by boat, bicycle, shuttle, or foot to experience Jamestown in new ways. This facility would also help visitors understand their options for going to both Jamestown Settlement and Jamestown Island.
- The replacement **Visitor Center and educational facility** would be in close proximity to the Jamestown Rediscovery™ Center and the Townsite, eliminating confusion and providing for the immediate needs of visitors. It would also provide adequate space for educational needs, which has always been lacking at Jamestown.
- The creation of the **Observation Building**, and the **interpretive anchors** at the east and west end of the Townsite would provide new exhibits and interpretation of archives, collections, and experiences of the historic site. The Ludwell Statehouse Group is significant because it is the site of a statehouse where the first meetings of government were held and legislative decisions were made. The Agricultural exhibit area provides an opportunity for visitors to see the types of crops and agricultural methods of the early settlers.
- The **addition of amenities** over the entire site would greatly enhance the visitor experience. By having features located at various and distinct parts of the Island, visitors have several choices how to structure their experience and to interact with the exhibits.

Alternatives C and E would offer similar but fewer benefits as Alternative B by making limited improvements to the interpretive program. The additional amenities in these alternatives,

however, would not outweigh the impacts to natural and cultural resources.

While Alternative D would not maximize the interpretive use of the resource and does not physically allow for meeting the Purpose and Need of the project to the extent that the other alternatives do, it does include elements that would enhance the visitor experience and would have fewer impacts on the natural environment. Therefore, **Alternative D has been identified as the Environmentally Preferred Alternative.** Alternative D would fulfill all of the goals of NEPA set forth by the CEQ by protecting cultural and natural resources for future use (goals 1 and 3) while adding amenities that would promote a safe and aesthetically-pleasing interpretive experience (goals 2, 4, and 6).

Alternative D proposes very little new construction in undisturbed areas; nothing is proposed at Neck of Land, there is no boat tour within Back River, and there are no hike/bike trails or bridges. Therefore, the upland and wetland habitats at Neck of Land remain intact, and the sensitive joint-vetch and bald eagle habitats are avoided. In addition, no modifications to the Colonial Parkway would be required at Neck of Land or within the Island parking lot.

On the other hand, there are various impacts related to Alternative D that the Preferred Alternative, Alternative B, either does not have or may negatively impact the visitor experience. By keeping all of the parking on the Island, bus and vehicular traffic would greatly increase as visitation growth occurs. A bald eagle nest is within close proximity to the Island parking lot, and the increased traffic may have an adverse impact on the eagles. In addition, the reconfigured existing Visitor Center would increase in height by an additional story. Not only would this structure continue to be an intrusion within the cultural landscape, but also its volume would increase the minor impact this structure currently has on the 100-year flood zone.

Alternative D was not chosen as the Preferred Alternative, however, because it lacks many elements of Alternative B that contribute to meeting the Purpose and Need of the project. There is no collocation of collections for collaboration and research of the “one” Jamestown collection. This also weakens the existing partnership. Alternative D does not open up the historical and cultural landscape for viewing due to the large multi-story building in the middle of the historic site. There is nothing in Alternative D that helps orient the visitor to choices within the context of the Jamestown Project. The huge problem of visitor confusion would continue with the implementation of this alternative. Also, there is no opportunity for new interpretive stories of settlers of all nationalities to be told via different approaches to the Island, either by water or on foot or bicycle. This diminishes the capacity of the project to attract and educate a wider, more diverse audience to the site. The visitor in Alternative D is totally dependent on the automobile and will not become engaged with Jamestown until they come to the Visitor Center in the historic Townsite. This alternative in no way encourages alternative modes of transport and diminishes the ability of the Island to be a destination site instead of a left over experience to catch for an hour or two.

Table 2-4 provides a summary of impacts related to each of the proposed alternatives. For more details on impacts, see “Chapter 4: Environmental Consequences.”

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Table 2-4: Summary of Environmental Consequences

Affected Environment		Action Alternatives				
		Alternative A (No Action)	Alternative B (Preferred Alternative)	Alternative C	Alternative D	Alternative E
Partnerships		Overall impact would be moderate and adverse.	Overall impact would be major and beneficial.	Overall impact would be moderate and beneficial.	Overall impact would be minor and beneficial.	Overall impact would be moderate and beneficial.
Cultural Resources	Ethnographic Resources	No known impact.	No known impact.	No known impact.	No known impact.	No known impact.
	Archaeological Sites	Overall impact would be negligible.	Overall adverse impact would be minor. Potential major impact to site 44JC631 in New Towne.	Overall adverse impact would be moderate. Potential major impacts to sites 44JC1047 at Neck of Land and site 44JC928 in New Towne.	Overall adverse impact would be minor, with minor to moderate impacts to underground structures 19A and 112 in New Towne.	Overall adverse impact would be moderate with potential major impacts at site 44JC631 in New Towne.
	Historic Buildings and Structures*	Overall impact would be negligible.	Overall adverse impact would be moderate and would occur at: <ul style="list-style-type: none"> Ambler House Ruins Footbridge and Restrooms Dale House Yardley House Entrance Booths/ Ranger Station Visitor Center. 	Overall adverse impact would be moderate and would occur at: <ul style="list-style-type: none"> Ambler House Ruins Footbridge and Restrooms Dale House Visitor Center. 	Overall adverse impact would be minor and would occur at: <ul style="list-style-type: none"> Ambler House Ruins Footbridge and Restrooms Visitor Center. 	Overall adverse impact would be moderate and would occur at: <ul style="list-style-type: none"> Ambler House Ruins Footbridge and Restrooms Dale House Entrance Booths/ Ranger Station Visitor Center.
	Cultural Landscapes	Overall impact would be negligible.	Overall adverse impact would be minor to moderate.	Overall adverse impact would be moderate.	Overall adverse impact would be negligible to minor.	Overall adverse impact would be minor.
	Archives and Collections	Overall impact would be major and adverse.	Overall impact would be beneficial and major.	Overall impact would be minor.	Overall impact would be major.	Overall impact would be major, with beneficial and adverse aspects.
Physical and Natural Resources	Soils	Overall impact would be negligible.	Overall impact would be minor: <ul style="list-style-type: none"> Hydric soils: 1.58 acres Prime farmland: 6.80 acres. 	Overall impact would be minor: <ul style="list-style-type: none"> Hydric soils: 0.99 acres Prime farmland: 6.97 acres. 	Overall impact would be negligible: <ul style="list-style-type: none"> Hydric soils: 0.23 acres Prime farmland: 0.68 acres. 	Overall impact would be minor: <ul style="list-style-type: none"> Hydric soils: 0.95 acres Prime farmland: 4.96 acres.
	Chesapeake Bay Resources	Overall impact would be negligible.	Overall impact would be minor. Direct impact to the RPA: 0.07 acres.	Overall impact would be minor. Direct impact to the RPA: 0.07 acres.	Overall impact would be minor. Direct impact to the RPA: 0.05 acres.	Overall impact would be minor. Direct impact to the RPA: 0.06 acres.
	Surface Waters	Overall impact would be negligible. Existing impervious cover: 21.5 acres.	Overall impact would be minor. Increase in impervious cover: 8.2 acres.	Overall impact would be minor. Increase in impervious cover: 9.0 acres.	Overall impact would be minor. Increase in impervious cover: 4.5 acres.	Overall impact would be minor. Increase in impervious cover: 8.5 acres.
	Floodplains/Flood Zones	Overall impact to floodplains would be negligible. Impact from flood damage would be moderate.	Overall impact would be negligible. New buildings and parking within 100-year flood zone: 0.89 acres.	Overall impact would be negligible. New buildings and parking within 100-year flood zone: 0.84 acres.	Overall impact would be negligible. New buildings and parking within 100-year flood zone: 0.16 acres.	Overall impact would be negligible. New buildings and parking within 100-year flood zone: 0.45 acres.
	Wetlands	Overall impact would be negligible.	Overall impact would be minor: <ul style="list-style-type: none"> Indirect: 0.87 acres Direct: 0.03 acres. 	Overall impact would be minor: <ul style="list-style-type: none"> Indirect: 0.28 acres Direct: 0.03 acres. 	Overall impact would be minor: <ul style="list-style-type: none"> Indirect: 0.27 acres Direct: 0.03 acres. 	Overall impact would be minor: <ul style="list-style-type: none"> Indirect: 0.80 acres Direct: 0.03 acres.
	Vegetation	Overall impact would be negligible.	Overall impact would be minor: <ul style="list-style-type: none"> Direct: 5.29 acres (upland) Indirect: 1.63 acres (upland). 	Overall impact would be minor: <ul style="list-style-type: none"> Direct: 7.18 acres (upland) Indirect: 2.12 acres (upland). 	Overall impact would be negligible: <ul style="list-style-type: none"> Direct: 0.39 acres (upland) Indirect: 0.11 acres (upland). 	Overall impact would be minor: <ul style="list-style-type: none"> Direct: 4.63 acres (upland) Indirect: 1.16 acres (upland).
	Wildlife	Overall impact would be negligible.	Overall direct impact would be minor.	Overall direct impact would be minor.	Overall direct impact would be negligible.	Overall direct impact would be minor.
	Rare, Threatened, and Endangered Species	Overall impact would be negligible.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be negligible.	Overall impact would be minor.
	Visual Quality and Aesthetics	Overall impact would be minor.	Overall impact would be moderate.	Overall impact would be moderate.	Overall impact would be minor.	Overall impact would be moderate.
	Air Quality	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.
	Noise	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.
	Hazardous Materials/Contamination	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be minor.

*The Colonial Parkway is also considered a historic structure; however, impacts to this resource were addressed under cultural landscapes.

Table 2-4: Summary of Environmental Consequences						
Affected Environment		Action Alternatives				
		Alternative A (No Action)	Alternative B (Preferred Alternative)	Alternative C	Alternative D	Alternative E
Socioeconomic Resources	Land Use and Zoning	Overall impact would be negligible.	Overall impact would be moderate and require land use changes at: <ul style="list-style-type: none"> Neck of Land from forest to developed area Island parking lot to new visitor center/educational facility New hike/bike trail -- marsh to visitor support and interpretation Dale House renovations require zoning change from James City County. 	Overall impact would be moderate and require land use changes at: <ul style="list-style-type: none"> Neck of Land from forest to developed area Island parking lot to new visitor center/educational facility Dale House renovations require zoning change from James City County. 	Overall impact would be minor.	Overall impact would be moderate and require land use changes at: <ul style="list-style-type: none"> Neck of Land from forest to developed area Island parking lot to replacement visitor center/educational facility New hike/bike trail -- marsh to visitor support and interpretation Dale House renovations may require zoning change from James City County.
	Regional and Local Economy	Overall impact would be negligible. Projected 2020 visitation: 552,180.	Overall impact would be major: Projected 2020 visitation: 749,800. Total cost: \$43,552,562.	Overall impact would be major: Projected 2020 visitation: 749,800. Total cost: \$40,646,665.	Overall impact would be moderate. Projected 2020 visitation: 634,840. Total cost: \$32,770,699.	Overall impact would be major. Projected 2020 visitation: 661,270. Total cost: \$40,577,877.
	Emergency Services	Overall impact would be negligible.	Overall impact would be moderate. Increased numbers of visitors and building space would require increased emergency services.	Impacts would be the same as Alternative B.	Impacts would be the same as Alternative B.	Impacts would be the same as Alternative B.
Research and Education		Overall impact would be beneficial and minor.	Overall impact would be beneficial and major.	Overall impact would be beneficial and moderate.	Overall impact would be beneficial and moderate.	Overall impact would be beneficial and moderate.
Visitor Experience		Overall impact would be negligible with no improvements.	Overall impact would be major and beneficial.	Overall impact would be minor.	Overall impact would be minor.	Overall impact would be moderate and beneficial.
Operations		Current staffing level provides the minimum level of service.	<ul style="list-style-type: none"> Overall impact to NPS operations would be major: an additional 25 FTEs and an operating increase of \$1,943,355 would be required. Overall impact to APVA operations would be moderate. 	<ul style="list-style-type: none"> Overall impact to NPS operations would be major: an additional 25 FTEs and an operating increase of \$1,943,355 would be required. Overall impact to APVA operations would be moderate. 	<ul style="list-style-type: none"> Overall impact to NPS operations would be moderate: an additional 13 FTEs and an operating increase of \$1,143,818 would be required. Overall impact to APVA operations would be minor. 	<ul style="list-style-type: none"> Overall impact to NPS operations would be major: an additional 25 FTEs and an operating increase of \$1,943,355 would be required. Overall impact to APVA operations would be moderate.
Buildings and Utilities		No improvement to NPS utilities or stormwater management system. APVA connected to public water and sewer.	Utilities and stormwater management upgraded to accommodate improvements and meet standards and specified codes. APVA connected to public water and sewer.	Utilities and stormwater management upgraded to accommodate improvements and meet standards and specified codes. APVA connected to public water and sewer.	Utilities and stormwater management upgraded to accommodate improvements and meet standards and specified codes. APVA connected to public water and sewer.	Utilities and stormwater management upgraded to accommodate improvements and meet standards and specified codes. APVA connected to public water and sewer.
Transportation and Site Access		No circulation improvements and no multimodal options. No change to Level of Service.	Overall impact would be major. Circulation would be improved by multimodal transportation system. No change to Level of Service.	Overall impact would be major. Circulation would be improved by multimodal transportation system. No change to Level of Service.	Overall impact would be minor. No change to Level of Service.	Overall impact would be moderate. Circulation would be improved by multimodal transportation system. No change to Level of Service.